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ABSTRACT

In many developing countries, the translation of political objectives to action projects is made difficult by the lack of training of staff of the ministry of education planning and managing units. This booklet deals with the implementation of these projects within the framework of the planning process. After defining projects, chapter 1 shows the role they play in the planning process and discusses the advantages and the disadvantages of using them. This chapter then describes the different types of education projects and their evolution over the last 20 years. The second chapter examines the criteria on which the identification and preparation of projects are based, and then goes on to analyze their goals, the various tasks and working methods they require, and the conditions under which they are carried out. In chapter 3, the modalities for financing projects are examined, both national and international sources of money. The problems of intervention by external sources of assistance are mentioned, the main characteristics of such sources are discussed, and the various multilateral funding sources are reviewed. Finally, the chapter examines the conditions under which negotiations are conducted. The final chapter studies the management of projects. It emphasizes monitoring and evaluation, necessitated by a constantly changing environment. (LAP)

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Education projects: elaboration, financing and management

André Magnen

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Fundamentals of educational planning

The booklets in this series are written primarily for two types of clientele: those engaged in -- or preparing for -- educational planning and administration, especially in developing countries; and others, less specialized, such as senior government officials and policy-makers who seek a more general understanding of educational planning and of how it is related to overall national development. They are devised to be of use either for private study or in formal training programmes.

Since this series was launched in 1967 the practice as well as the concept of educational planning have undergone substantial change. Many of the assumptions which underlay earlier attempts to put some rationality into the process of educational development have been abandoned or at the very least criticized. At the same time, the scope of educational planning itself has been broadened. In addition to the formal system of schools, it now includes other important educational efforts in non-formal settings and among adults. Attention to the growth and expansion of educational systems is being supplemented and sometimes even replaced by a growing concern for the distribution of educational opportunities and benefits across different regions and across social, ethnic and sex groups. Educational planners and administrators are concerned to take a more systematic attitude towards their social responsibilities. They are learning to act as 'conveyor belts' between the classroom (or any other place of

learning) and the decision-maker, whether he be found at the local or regional level, at the head of a central department or institution, or in any one of its various branches. Their concern is twofold: to have a better understanding of the reality of education, in its own specific dimensions, empirically observed; and to ensure better analysis and consideration of this reality so as to improve, where possible, the hypotheses that underlie educational policies and strategies for change.

One of the purposes of these booklets is to reflect this diversity by giving different authors, coming from a wide range of backgrounds and disciplines, the opportunity to express their ideas and to communicate their experience on various aspects of changing theories and practices in educational planning.

Although the series has been carefully planned, no attempt has been made to avoid differences or even contradictions in the views expressed by the authors. The Institute itself does not wish to impose any official doctrine on any planner. Thus, while the views are the responsibility of the authors and may not always be shared neither by UNESCO nor the IIEP, they are believed to warrant attention in the international forum of ideas.

Since readers will vary so widely in their backgrounds, the authors have been given the difficult task of introducing their subjects from the beginning, explaining technical terms that may be commonplace to some but a mystery to others, and yet adhering to scholarly standards. This approach will have the advantage, it is hoped, of making the booklets optimally useful to every reader.

Preface

In many developing countries in recent years there have been signs, against the background of acute economic and social crisis, of a widening gap between the objectives set by national authorities and the results obtained. While the reasons for this are numerous, and vary from country to country, there is one factor common to many of them: the lack of links, and even cohesion, between the national policy and measures aimed at bringing about the desired changes, such as, to provide two examples, the universalization of primary education or the improvement of secondary education.

This booklet aims to highlight the importance of integrating the design and execution of development projects with global (sectoral and sub-sectoral) planning. In the view of its author, André Magnen, relevant and effective planning requires of planners that they pay closer attention to the translation of political objectives into action programmes, that they ensure continuous monitoring or guidance of project execution, and that they systematically evaluate project results. Unfortunately, all this has turned out to be difficult, if not impossible, in many developing countries, because of a lack of training of the staff of Ministry of Education planning and management units.

The problem of implementation of national development policy is not, of course, related solely, or even mainly, to the technical expertise of the officials at the various institutions

involved. But the fact of not having fully mastered the methods of project identification, elaboration and evaluation quite obviously constitutes a serious handicap, when countries enter into negotiations with external (bilateral and multilateral) funding agencies, whose importance continues to grow.

This publication is an integral part of the IIEP's efforts to strengthen the ability of countries to prepare education projects that are consistent with national priorities, and viable in educational, social, administrative and financial terms. In this respect, the work is not limited to a simple presentation of the basic techniques concerning projects, but also discusses their role in the planning process, with special attention being given to the criteria for appraising education projects. The booklet makes frequent reference to specific cases, that is, education projects that have been carried out in various developing countries over the last ten years.

The booklet's author, André Magnen, is a former UNESCO staff member. Within the framework of the UNESCO/World Bank Co-operation Programme, he spent more than 25 years conducting sectoral studies, identifying and preparing projects in numerous countries. This rich and varied experience, supplemented by his work in IIEP's training programme, has made Mr. Magnen a highly-qualified expert in this field, which is of crucial importance for the development of educational systems. I thus express the hope that this booklet will demonstrate its usefulness not only for planning practitioners, but also for policy decision-makers and representatives of education funding sources.

Jacques Hallak
Director, IIEP

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Introduction

The experience of the last thirty years has revealed the limitations of educational planning, at least as traditionally conceived. It has, in fact, been rare for education plans to achieve their objectives. The lack of realism in the setting of these objectives, in the evaluation of administrative capacities, and in the estimation of available resources is the most obvious cause of these failures.

In the face of these disappointing results, both decision-makers and administrators are now interested in a more pragmatic and less doctrinaire approach to planning than in the past. While policies remain the foundation of planning, more attention is now being paid to the programmes and projects flowing from policies. Attempts are being made to design and to implement them more methodically. Moreover, these processes are more readily based on the lessons of experience.

The financial crisis presently experienced by many countries throughout the world reinforces this trend, because of the need to manage public expenditure more rigorously. This increasing constraint is making those responsible for financial affairs, whether national or foreign, more reticent than in the past to increase their contribution to education, because of the significant budget share allocated to this sector.

The implementation of policies is progressively becoming a major centre of attention in educational planning. Yet in many

situations, this phase remains the weak link or the Achilles heel of the overall process.[1] Projects are one of the best ways for decision-makers to gain control of it, because their objectives, budgets and implementation periods are clearly defined. For this reason, Ministries of Education as well as sources of external assistance, are resorting to projects more and more frequently.

This booklet deals precisely with the implementation of education policies by means of projects, within the framework of the planning process. The point of view adopted is that of national authorities responsible for the development of education. Emphasis is put on the experience of developing countries, pertaining more particularly to projects financed with the support of external sources, and especially the World Bank. However, most of the lessons learned from this experience are just as valid for projects that are financed entirely by national sources.

After having defined projects, Chapter I shows the role they play in the planning process, and discusses the advantages and disadvantages of using them; then it describes the different types of education projects, and their evolution over the last twenty years; finally, it summarizes the various stages in their elaboration and execution.

Chapter II first of all examines the criteria on which the identification and preparation of projects are based, and then goes on to analyse their goals, the various tasks and working methods they require, and the conditions under which they are carried out.

In Chapter III, we look at the modalities for financing projects, either from national sources, or with money from outside the country. Regarding the former, emphasis is put on the possibility of calling on non-budgetary resources. The problems involved in intervention by external sources of assistance are mentioned, then the main characteristics of such sources are discussed, and the various multilateral funding sources are reviewed. Finally, the chapter examines the conditions under which negotiations are conducted.

1. IIEP, *Educational planning in the context of current development problems*, Paris, Unesco: IIEP, 1985.

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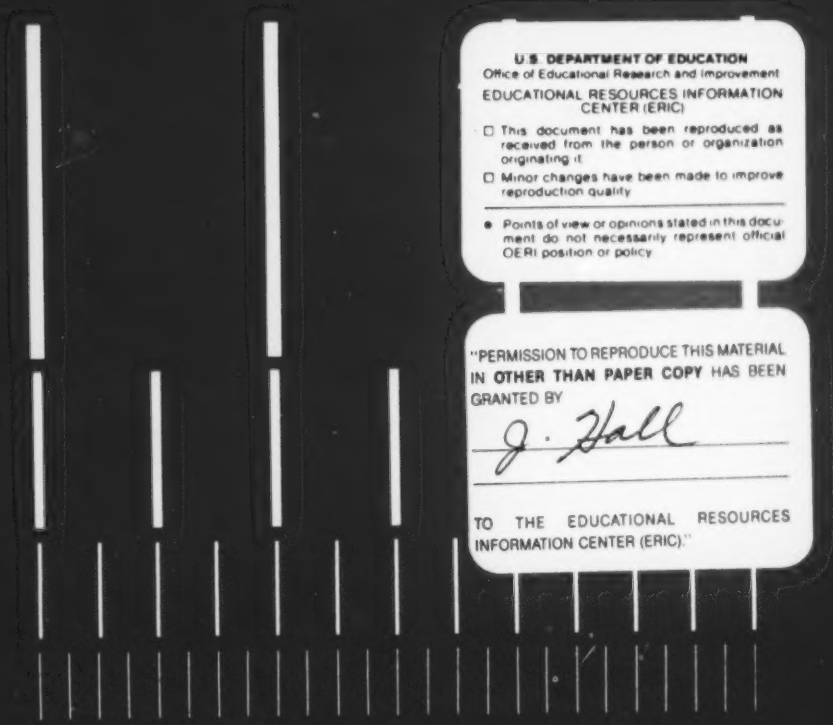
Fundamentals of Educational Planning



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Chapter IV studies the management of projects. It emphasizes monitoring and evaluation, which are indispensable for timely application of adjustments necessitated by the constantly changinging reality of situations, and in order to benefit from experience.

The writing of this booklet was possible thanks to the experience accumulated under the co-operative programme between UNESCO and the World Bank, by other units within UNESCO, by the International Institute for Educational Planning, and by the World Bank itself. I would like to extend special thanks to the staff members of those institutions, and to the other specialists who were so kind as to take the time to read the first version of the manuscript. Their criticisms and their comments have constituted an inestimably valuable contribution in finalizing this booklet.

I. Policies, plans, programmes and projects

Before examining the methods used to prepare education projects, it is necessary to have a more precise understanding of the domain under consideration, that is, to define what is meant by projects and how they differ from, for example, programmes, to situate their role in the planning process, to show the diversity of their objectives and of the means used to implement them, and to describe all the stages they go through from inception to completion. Such is the purpose of this first chapter.

In the course of our discussion, we often refer to planning, to plans and to projects in general. Unless indicated otherwise, the statements made apply to educational planning, which in fact usually constitutes an integral part of the general process of economic and social development planning.

The role of projects in the planning process

Definitions

There are many definitions of the word "project", but none is universally accepted. Here is the one that we shall use: "A project is a set of investments and of other planned activities aimed at achieving specific objectives within a pre-determined time-frame and budget".[1] For example, a project may involve the expansion

1. W.C. Baum and S.M. Tolbert, *Investing in development*, Oxford University Press, 1985; IIEP, Unit on the identification, preparation and evaluation of education projects, *Advanced Training Programme in Educational Planning and Administration 1987/88*, Paris, 1987.

of primary education in a given region of a country. Contrary to a widespread notion, the word "project" does not apply only to activities financed with the support of outside assistance. While it is true that a major part of external aid to developing countries is supplied through projects, there are other projects for which financing is entirely national in origin.

Generally speaking, the word "programme" means a series of planned activities with a broader scope than a project. Unlike projects, programmes do not necessarily include investments. The domain of activity of a programme can be an entire sector (for example, education), or a sub-sector (for example, primary education), or a major function of the system (for example, the elaboration of school curricula and textbooks). The execution period of a programme is often longer than that of a project. A programme may consist of a set of projects, aimed at achieving several related objectives. For example, a programme with the objective of improving the quality and relevance of primary education might consist of three projects:

(a) elaboration, production and distribution of school textbooks and equipment;
(b) in-service training of teachers;
(c) creation of a system for continuous evaluation of the quality of education.

The planning process and projects: the theory

It may be considered that economic and social development plans have a dual function: first, from the political point of view, to mobilize efforts for national development; then, from the operational point of view, to provide a coherent framework for the integration of these efforts. This framework may be a set of programmes and/or projects, which represent the means of implementing the plan, or making it operational. The presentation of an investment budget, in the form of a logically structured set of projects, makes it possible for national authorities to more easily obtain external aid support, should this be needed.

The planning process, as traditionally defined, can be broken down into three main stages:

- definition of the development policy;
- estimation of available resources;
- elaboration of programmes and projects.[2]

The first of these stages, the foundation of the entire structure, is the definition by the government of its *development policy*: on the one hand, its general policy (economic growth, income distribution, employment, for example), and, on the other, its sectoral policies (agriculture, industry, transport, education, health, etc.). Taking into consideration the results of the previous plan, the development policy sets out the general objectives pursued by a government in different sectors. Here, *general objectives* means the long-term goals, the priorities and the strategy of development. Planners then translate these into quantitative targets, which, in the course of the plan's elaboration, can be revised according to available resources and arbitration among the various sectors.

In the second stage, planners estimate the *available resources* for the execution of the plan (human resources, budgetary resources, national savings, financing from external sources, foreign currency, etc.). This is a stage of the utmost importance, for the limits of these resources constitute constraints for the national economy, and consequently for the plan's objectives as well. In the domain of education, in particular, committed expenditure absorbs a very large share of total available resources, thereby leaving a rather small margin for new investments, and consequently for projects.

In the course of the third stage, planners draw up one or several *activity programmes* for each sector, which are aimed at achieving the objectives of the plan. Then they estimate the amount of investment required to implement them. Each sectoral programme may consist of a certain number of *projects*. The programmes and projects in the different sectors are then revised by the plan's co-ordination team, in order to ensure overall coherence, and to keep total activities within the limits of available resources. Corresponding capital expenditure is then incorporated into the plan's investment budget.

2. IIEP, Unit on the identification..., op. cit.

The planning process and projects: actual reality

In reality, the role of education projects in the planning process is variable; in developing countries, it often differs considerably from the one set out in theory.

In the first place, education projects are rarely conceived at the time of elaboration of the plan. In most cases they are products of the workings of the educational system, which is not necessarily in step with the planning process. Contrary to the classical pattern, it is rare for the cycle of education project preparation and execution to coincide with that of the plan. Since the period covered by a plan is relatively short, usually three to five years, the execution of certain projects may well overlap two successive plan periods.[3]

In the second place, in some countries, the main functions of the plan, namely the mobilization of national efforts and the implementation of the national development policy, have more or less given way to the need to seek out and motivate external financing. In the extreme case, the plan may be nothing but a scaffolding erected to justify the involvement of foreign aid sources.[4] The list of projects appearing in such a plan is more a catalogue for the use of aid agencies than a coherent approach to the implementation of a systematic educational policy.

It is not surprising that these sorts of ersatz plans have failed. Unfortunately, however, many other education plans have also missed their mark, whether aimed at increasing school attendance, improving the quality of education, or reforming the system as a whole. The most evident cause of these failures is the lack of realism of plans, their objectives often having been established without sufficient prior analysis and merely on the basis of the society's values and traditions, or its leaders' ideologies. In other cases, failure can be due to over-estimation of the resources available for new actions, because the plan did not make sufficient allowance for previous commitments, which always weigh very

3. IIEP, Unit on the identification..., op. cit.

4. IIEP, *Educational planning in the context...*, op. cit.

heavily in an education budget, or for recurrent costs resulting from proposed investments.

These errors of assessment have been further aggravated by the financial difficulties of countries, born of unpredictable fluctuations occurring in the international economic and financial arena. The rigidity of the traditional planning process hardly makes it possible to apply the changes that become necessary in such cases. The structural adjustment policies adopted by governments, under pressure from their international creditors, have sometimes resulted in casting aside entire sectors of development plans. Past disappointments have resulted in growing scepticism among political leaders and other development agents with regard to ambitious plans and radical reforms. And this is true, in particular, of education.

A more pragmatic and more cautious approach is now winning the favour of many; it ascribes greater importance to the application of policies, to their translation into programmes and projects, since the proof of their feasibility is to be found at this practical level.[5] This pragmatic approach is manifested, in particular, by a tendency to make the planning process more flexible.

The classical multi-year plan, which fixed objectives, means and programmes for a period of several years, is tending to give way to a less structured set of policies, which are implemented through flexible programmes and projects, able to adapt to circumstantial and structural changes. The way in which policies are applied, while preserving their original goals, can vary with time so as to benefit from experience, respond to new needs, or adjust to a financial constraint. The precise elaboration of objectives, priorities and of the strategy is tending to shift downstream in the planning process to the stage of programme and project design, although not replacing the definition of education policies, which remains the point of departure of the process. This approach facilitates the adjustment of objectives and of the implementation strategy as a function of reality, provided,

5. IIEP, *Educational planning in the context...*, op. cit.

as we shall see later, that a mechanism for project monitoring and evaluation has been set up.

Advantages and disadvantages of projects

Breaking down an investment budget into distinct projects makes it possible to rationalize the implementation of development policies. The main advantage consists in the logical structuring of problems, of development objectives, of proposed solutions and of projected investments.[6] This logical framework necessitates a certain degree of rigour on the part of policy-makers and administrators in its elaboration and execution. It makes it possible to ensure that the initial objectives are not lost sight of, and that the allocated resources are used in a rational manner. The specificity of the objectives and the need to define them clearly force the planner to design projects realistically. Moreover, the concrete nature of projects gives them good visibility, which is highly appreciated by external aid sources. Finally, fragmentation of actions and clarification of their objectives make it easier to assess results and to learn lessons for the future.

On the other hand, project utilization has its limitations. A priori, it would seem to be poorly suited to sub-sectors that require many small investments in the field, such as primary education. Experience shows, however, that programmes designed to implement such investments gain a lot from being elaborated on the basis of the methods used for projects. The same is true when there is a shortage of precise data that could be used to clearly define problems and objectives. The discipline required in the elaboration of a project makes it possible at least to identify gaps and to try to fill them.

The accusation is sometimes made that projects eliminate any coherence the plan might have, because of the fragmentation they introduce into its implementation. Such incoherence occurs when the plan is aimed more at seeking and receiving external financing than at implementing national development policies. As Aimé Damiba[7] has put it, the planning process is then completely inverted. First the projects likely to enjoy the support of a foreign

6. W.C. Baum and S.M. Tolbert, op. cit.

aid source are identified, and only as a second stage are the consistency and coherence of the objectives of the projects established in order to then elaborate the plan's general orientations. Under these circumstances, national objectives play second fiddle to external aid policies.

This danger is very real. However, its root cause is not the breakdown of investments into projects, but rather the excessive dependence of the countries in question on foreign donors for investment funding. The dearth of national managers trained in the methods of project elaboration and management is also a severe handicap for these countries.

In summary, projects offer governments a way of implementing their education policies that is simultaneously rational, flexible and adaptable to changing situations. The elaboration of projects, because of the rigour and the realism required by the process, also constitutes a first test of the feasibility of certain policies even before they are applied. As a result, projects can play a salutary role of re-orientation, toward a more pragmatic approach, in the course of educational planning.

A history of education projects

The variability of education projects is considerable, in terms both of their objectives, and of their domains of action or their content. These characteristics have evolved markedly over the last quarter of a century, a period that has witnessed a mushrooming of education projects in developing countries. We illustrate this evolution by examining that of projects financed by the multilateral development banks and funds. These organizations, of which the World Bank is the main one,[8] were created by the international community to aid the economic development of

7. A. Damiba, "Theory and reality in educational planning". In: *Educational planning and social change*, Paris. UNESCO: IIEP, 1980.

8. World Bank, *Education sector policy paper*, Washington, D.C., 1980.

under-equipped countries through loans. For more information on this subject the reader is referred to Chapter III.

Looking at the evolution of education projects financed by multilateral banks and funds, one can distinguish three phases, roughly corresponding to the sixties, seventies and eighties.

The sixties

At that time, the involvement of multilateral banks and funds in the field of education was generally subjected to relatively strict criteria regarding the connection between projects and economic development needs. For example, the education projects financed by the World Bank pertained, on the one hand, to vocational training and technical and agricultural education at all levels, and on the other hand, to general secondary education, which numerous projects tried to diversify by developing scientific and technical streams. The Inter-American Development Bank had a broader scope of intervention, extending in particular to university education as a whole. The obvious major absence from this list was primary education. The banks considered at the time that its expansion was mainly a response to social demand, and therefore could not be justified by the needs of economic development.

Throughout this period, expenditure financed by multilateral bank assisted projects included only the construction and equipment of school infrastructures. Technical assistance, training scholarships, and more generally any expenditure related to intellectual investment -- for example, development of the national capacity to develop school curricula, to manage, to plan or to do pedagogical research -- as well as operating costs, were rarely taken into consideration. This kind of involvement, when it turned out to be necessary, was generally financed by other aid sources, such as the UNDP, various bilateral aid programmes or non-governmental organizations, whose funding was co-ordinated, to the extent possible, with that of the banks.

The *evaluation of projects in the sixties*, carried out at the beginning of the following decade, showed that they did, in fact, help the beneficiary countries to achieve their expansion objectives in secondary education, post-secondary education and vocational training. On the other hand, virtually no improvement

was noted as regards the quality and effectiveness of education. This shortcoming can be explained by the excessively equipment-oriented content of investments financed through projects. While a certain amount of progress was sometimes made in the teaching of sciences, the introduction of practical courses into general secondary education did not meet with the success expected.

As far as the physical components of projects were concerned, the quality of civil engineering work was generally satisfactory. But the supplying of equipment was almost always plagued by delays, and its quality sometimes turned out to be inadequate. These difficulties remain even to this day.

Finally, technical assistance support and training scholarships supplied by aid sources other than the multilateral banks often raised serious problems, especially in terms of seeking financing and of co-ordination of the actions undertaken.

The seventies

During the seventies, the development aid policies followed by multilateral banks, whose thrust had been exclusively economic up to then, started to be more socially oriented. Around 1970, there was increasing criticism concerning the lack of impact of growth in developing countries on the standard of living of the poor, especially in rural areas. Multilateral banks realized that the projects they had financed had served only to widen disparities, instead of correcting them. Without putting into question the priority given to the promotion of economic development, they gradually re-directed a growing proportion of their funding to social objectives: nutrition, literacy, reducing infant mortality, increasing life expectancy, improving the productivity of small farmers, etc.

This shift in the policies of multilateral banks was reflected in the education projects they financed during the seventies. Four main objectives, of variable importance depending on the funding organization, were pursued: primary education, or, if classical primary education turned out to be too costly or ill-suited to the country's needs, the search for another form of basic education that could be generalized; selective development of the subsequent

levels of education and training to meet the demand for qualified manpower; improvement of the effectiveness and quality of education; finally, equalization of opportunities of access to education. These new thrusts led the multilateral banks to finance numerous projects aimed at implementing more or less global reforms of education systems. Thus the projects of the seventies encompassed not only all types and levels of education, but also institutions serving all or part of the education system, such as units responsible for educational planning, pedagogical research, financial services and education personnel.

With a view to selecting priority projects carefully, several multilateral banks asked borrowing states to carry out a diagnostic study of their education system, encompassing its problems, its prospects and the government policy. Such studies were often carried out in the seventies with the assistance of UNESCO.

In a more general sense, UNESCO played an important role in the broadening of multilateral bank programmes. The *Learning to Be* report, published by UNESCO, profoundly influenced their conception of education, and UNESCO missions, especially those under its co-operative programme with the World Bank, often proposed extending projects to fields that had been excluded up to then, such as primary education and curriculum development.

In the seventies, a large number of projects financed experimentation with or development of non-formal education. Some were aimed at agricultural or crafts training, while others concentrated on adult literacy, in particular by using primary schools as development centres, as recommended at the time by many educators. Others sought to find basic education patterns that would be less costly than classical primary education, and better suited to the conditions of disadvantaged rural areas. Finally, a number of projects designed in the seventies funded the study, experimentation or development of new technological means, such as radio or television, for education. Many specialists then thought that such means would facilitate the expansion and improvement of primary education by raising its productivity.

The expenditures financed through projects also became much more diversified than in the preceding period. While construction and equipment continued to account for the lion's

share of the great majority of projects, four-fifths of them did include intellectual investment (technical assistance and training scholarships). This was the case, in particular, for curriculum development, the production and distribution of school textbooks, assistance with the planning and administration of education, experimentation with innovations, and the carrying out of pre-investment studies. One of the main objectives pursued by intellectual investment is the strengthening of national institutions, so as to ensure sustainability of the changes brought about.

Mention should also be made of the development, during this period, of educational components in projects pertaining to other sectors -- for example, rural development or transport. The purpose of such components is either to train project beneficiaries or staff, through, for example, a functional literacy programme, traineeships or a vocational training centre, or to construct primary or secondary schools within the framework of an integrated rural development or town planning project.

The results achieved by the projects of the seventies by and large confirm those of the sixties, although a few new observations were made. For instance, with the exception of Africa, intellectual investment had a positive influence on the quality of education, and on the development of relevant national institutions. On the other hand, components aimed at medium-level agricultural training often had to scale down their quantitative objectives, because of declining demand for technicians at that level.

Evaluations underscore the failure of the many reforms or innovations supported by projects. Their proponents frequently under-estimated the difficulties of implementation and the cost. This was true, in particular, of projects aimed at the development of non-formal education; the idea of providing such education in primary schools after class hours turned out to be inapplicable in most practical cases. As to the new technological means, the results of their use were variable, and it sometimes turned out that the proponents had been too optimistic.

The provision of technical assistance and scholarships yielded positive results in several areas, especially technical education and the development of institutions. However,

recruitment delays, lack of precision in post descriptions, and the instability of counterparts sometimes reduced its impact.

Evaluations also revealed that the biggest problem in project execution is the difficulty for borrowing states, because of their other budgetary commitments, to entirely finance the additional operating costs generated by projects. Finally, the experience of the seventies shows that it is practically impossible for an education project to achieve its objectives if the policies followed are ill-adapted, whether they be a continuation of past trends, or whether they be inspired by a will to reform.

The eighties

In the course of the eighties, the characteristics of education projects financed with the support of multilateral banks were shaped by three main influences: the impact of the world economic crisis on borrowing countries, the results of projects during the previous decades, and research work on education and development.

While maintaining their former objectives, especially as far as primary education was concerned, the multilateral banks came to favour improvements in the efficiency of educational systems, because of the severity of crisis-induced budgetary constraints. In this respect, projects were often aimed at encouraging certain changes in national education policies, for example those regarding the allocation of budgetary resources for education, or the policy concerning scholarships.

Past experience brought about a reduction in the importance ascribed to certain types of education, such as non-formal education and the training of agricultural technicians. Financial constraints also made it necessary to examine education expansion projects with more caution, and to give priority to the renovation of existing facilities, to qualitative improvement and to institutional development.

Recently published research on the relationship between education and development in the world has emphasized the essential role of primary education in increasing productivity, and its high social rate of return. These results provided justification for the priority given by most multilateral banks and funds to the

expansion and qualitative improvement of such education, especially in countries where it still encompasses only a fraction of the school-age population.

Finally, to bridge the gaps noted in the past, projects financed by multilateral banks tend increasingly to cover not only physical and intellectual investments, but also part of the recurrent costs, including staff salaries and the use of national consultants, who are preferred to foreigners when qualifications and experience are the same.

All in all, education projects financed by multilateral banks have changed considerably over the last twenty-five years. The main features of this evolution are as follows:

- an increasingly detailed study of the national education situation and of the government's policy, with respect to the country's economic, social and financial context, before elaboration of the project;
- an increasingly closer linkage between projects and policies, favouring adjustment of the education system to financial constraints;
- a gradual opening-up of projects to encompass all types, levels and institutions of education;
- the growing importance of quality improvement and institutional development objectives;
- the gradual extension of donor and multilateral bank financing to all categories of expenditure, including operating costs and salaries.

The successive stages of a project

The life of a project is usually divided into several consecutive stages. This sequence (see Figure 1) is often known as the project cycle, because each stage is the logical successor of the preceding one, while the last stage prepares the first of the next cycle.[9]

9. W.C. Baum and S.M. Tolbert, op. cit.; IIEP, Unit on the identification..., op. cit.

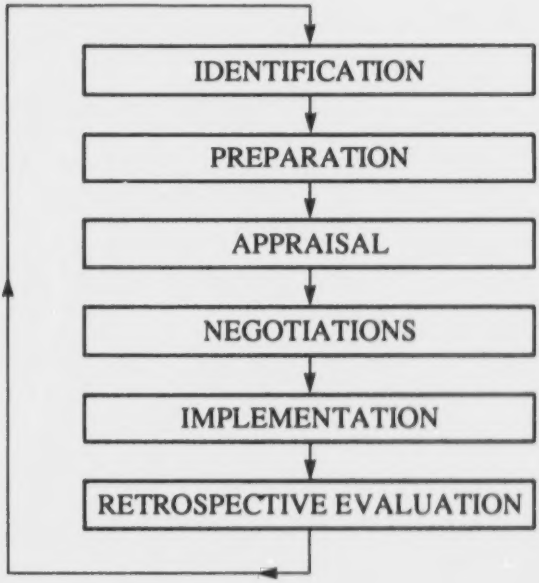

Figure 1. *The project cycle*

In practice the distinctions between the various stages are not always sharply drawn. In some projects, the first two or three stages are more or less merged, and in others there is no retrospective evaluation. On the other hand, projects financed by international aid sources generally follow the cycle quite closely. Despite these variations, it can be stated that, the broad outline of the cycle is followed by most education projects. We now briefly review the different stages, examining the purpose, the agents and the process of each.

The first three stages of the cycle, those occurring before project execution, have two complementary objectives. First, to select high priority projects, likely to contribute substantially to the country's development. Second, to study them in detail so as to be sure of their feasibility, and prepare their implementation.

At the end of this first part of the cycle, some projects are chosen and included in the national investment budget, while others are eliminated.

This selection is justified by the fact that the resources available for investment over a given time-period -- for example, the duration of the plan -- are limited, and therefore not all proposed projects can be chosen. The proper management of national resources requires keeping only the best projects, i.e., those that will contribute most usefully to national development and are the most liable to succeed. Too often in the past, considerable human and financial resources have been invested in enterprises that were not in line with national needs, were poorly designed from the technical point of view, unrealistic, or too costly, leading almost inevitably to mediocre results. Selection is intended as protection against these risks of failure.

The purpose of *identification* is precisely to select one or several projects with high priority for the country's development, and then to define their objectives, strategy and main characteristics. This early selection means that the long and expensive stage of preparation can be reserved for those projects whose priority is justified. Thus the main function of identification is to *justify* the priority of identified projects. To justify an education project is to show that it has high priority, in that it is likely to substantially improve the performance of education. It is also to show that the project is in conformity with the national development and education policies. The responsibility for identifying education projects usually falls on the Ministry of Education, and in particular the unit entrusted with planning.

Given the scope and the complexity of the sector, it is often necessary, before identifying a project, to conduct a study of the education sector as a whole, in order to identify major priorities or areas of potential projects.

The project identification report often serves as the basis for initial discussions with expected funding sources, with a view to securing their preliminary agreement before undertaking preparation.

Project *preparation* has two main purposes: studying in detail all the aspects of the project, so as to ensure that it is reasonably feasible; planning its execution, so that it can start without delays. As in the case of identification, responsibility for the preparation of education projects generally falls on the Ministry of Education concerned.

Contrary to identification, project preparation is a long and costly operation. It studies all the aspects (technical, institutional, socio-political, economic and financial) that have a bearing on the project's success. It details the necessary investment items, quantifying their costs, as well as the additional recurrent expenditure generated by the project. It envisages the organization to be provided and the measures to be taken for project execution, as well as the subsequent functioning of the institutions concerned. Preparation often requires carrying out pre-investment studies, with a view to selecting the most appropriate technical or institutional approaches. All this takes time, but this is far from wasted if the work is well done. Experience has shown, in fact, that detailed preparation is one of the keys to project success, and can result in significant savings on the required outlay.

The project preparation report and its attachments (pre-investment studies, architect's drawings, call for tender documents) are transmitted to the authorities responsible for financing, and are studied by the competent services before the decision to approve or reject the project is taken.

Appraisal is therefore the more or less in-depth study, of the project by the government departments or organizations that are to arrange for financing (Ministry of Planning or of Finance, external aid sources) before approval is given.

Like identification and preparation, appraisal has the goal of ensuring that the project is justified and feasible. In addition, it must verify that the project has been sufficiently well prepared for implementation to start as soon as the project has been approved. Coming under the responsibility of financial decision-makers, in the appraisal of an education project particular importance is

attached to its integration with the overall set of national activities, as well as to its economic and financial aspects.

Thus the working group entrusted with appraising a project has to review in minute detail the various issues already examined during the preceding stages. The scope and the degree of formality of the appraisal process depend on the human and financial resources devoted to it. But the criteria it uses remain logically the same. These criteria, which we will study in the next chapter, are also taken into consideration at the stages of identification and preparation, since they condition approval of the project by financial decision-makers.

The appraisal stage usually closes with *negotiations* between representatives of the Ministry of Education and of the financial decision-makers. The negotiations result in an agreement as to the project's objectives, design, content and mode of financing. The Ministry of Education representatives obviously have a better chance of having their point of view accepted if the project documentation is well prepared, and if they are perfectly familiar with the different aspects.

Project implementation or *management* includes the implementation of all the investments and other actions provided for by the project: construction of buildings, purchase of equipment, training of staff, technical assistance, miscellaneous services, project monitoring and evaluation. It ends when the schools or other institutions developed by the project can function normally. The responsibility for execution of an education project can lie with the Ministry of Education, with another ministry, such as Public Works, or with the donor agency as regards the components they have financed.

All projects encounter difficulties in the course of their implementation, and some of these are unforeseeable. *Monitoring* and *evaluation* aim to detect and analyse such problems, so as to solve them in a timely manner. The purpose of monitoring is to provide project officers with periodic information regarding a number of indicators. This allows the officers to detect difficulties

quickly, so as to apply early remedies. Evaluation during the implementation of the project (for example, mid-term evaluation) provides a provisional assessment of the project. If it brings serious potential problems to light, its analysis may induce the officials concerned to decide on certain changes in the objectives, the strategy or the content of the project.

Monitoring and evaluation are of great importance for the successful implementation of projects, and have proved to be especially useful for educational reform projects, whose execution is particularly tricky because of their uncertainty.[10] The role of monitoring and evaluation has increased in recent years, with the new and more pragmatic approaches to educational planning.

The *retrospective evaluation* stage involves studying the project's results after its completion, and hence when its final costs are known. It compares actual outlays and results achieved with the project's original estimates. Its main purpose is to identify the reasons for apparent successes and failures, so as to inform the competent authorities and to draw lessons for future projects.

Retrospective evaluation is carried out by the Ministry responsible for execution of the project, or by another governmental organization. In addition, external aid sources often carry out retrospective evaluations of projects they have financed.

All in all, the identification, preparation and management of projects are complex tasks, requiring the availability, within an educational planning unit, of an adequate number of experienced specialists having received appropriate training. Relying on such specialists, Ministers can make their education policies more operational, by translating them into sufficiently well elaborated projects to be submitted, and successfully defended, to national planning authorities and external aid sources. A carefully constituted reserve of projects can make it possible to take advantage of ad hoc funding offers, which, in the absence of well elaborated proposals, might not always find useful application.

10. A.M. Verspoor, *Project management for educational change*, Washington, D.C., World Bank, 1986.

Is the project cycle too complex?

At the end of this overview of the project cycle, the length and complexity of the process, and the large number of stages apparently dealing with the same issues may seem excessive. Indeed, when the entire cycle is followed through, it often takes three years or more to move from initial discussions to the final decision on financing. During this interval, even if the project has preserved its priority for national development, it may have lost a good part of its political relevance, because of changes in the economic situation, shifts in public opinion, or changes within the government. Difficulties in execution and uncertainty of results may then be accentuated. Would it not be preferable to devote less time to a process that may seem perfectionist, and to strike while the iron is hot, as counselled by conventional wisdom?

These considerations of political urgency are apparently not without relevance. Nevertheless, experience has shown that the time taken and the care given to preliminary studies and to successive analyses of the project by different teams, and later to its attentive evaluation, are not lost. These precautions make it possible to reject inappropriate or unrealistic projects, and to avoid wasting scanty resources, be it in terms of competent managers or of financial means. Improvements introduced into the design of a project allow for substantial savings, avoid implementation difficulties, and facilitate subsequent adjustment to changes in the political, social or economic environment. This iterative and experimental approach is particularly appropriate in the social and human domain, in which there are hardly any sure-fire action techniques.

In actual practice, planners involved in designing an education project end up looking for a compromise -- an acceptable balance between the contradictory requirements of political urgency and technical cautiousness. The experience of previous projects is probably the best guide to finding this balance.

Designing and preparing good projects, and then executing them under good conditions, are difficult tasks, requiring a sense of detail and reflection, method and rigour, and also constant attention to social and economic developments. Rigour is not

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synonymous with rigidity: inflexible projects that are incapable of adapting to changes in their environment rarely achieve their objectives, especially in social domains. This is why practitioners now attach growing importance to project monitoring and evaluation. This perspective of a method that is both rigourous and adaptable to reality will be dealt with in the following Chapters.

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II. Elaboration of education projects

In the preceding chapter, we distinguished among three stages in the first part of the project cycle, the part preceding implementation: identification, preparation and appraisal. In reality, as we have seen, the border line between the first two stages is not clearly drawn: both are the responsibility of the same national departments, which preferably delegate the same staff for both functions. They have the same purpose, but differ in the degree of detail of the elaboration. The third stage is more distinguishable, both because of its goal, which is to review the project, and in that the responsibility lies elsewhere, namely with those who hold the purse strings. Nevertheless, these three stages are part and parcel of the same iterative process of project elaboration, they use the same methods, and their common goal is to bring the design and the execution plans of the project to a level sufficient to allow for commencement of implementation with maximum probability of success.

It is not just a truism to say that, in the long run, the quality of a project cannot really be judged until after it is finished. Experience acquired in the elaboration and implementation of education projects has made it possible to draw up a number of criteria that such projects must meet in order to be selected at the appraisal stage, and to have good chances of achieving their objectives. We shall refer to them as the *appraisal criteria*. It is obvious that those responsible for elaborating a project must pay

very close attention to these criteria. This is why we open the chapter with an examination of them, before studying project identification and preparation methods.

Criteria for appraising education projects

To a certain extent, the appraisal criteria of a project vary according to the conditions specific to the country in question, and to the nature of the project itself. Nevertheless, they are similar in broad outline. We are largely inspired by the criteria used by the World Bank, which practises rigourous and complete appraisal of projects, and whose criteria have now been adopted by many other organizations, both national and international.

The criteria used by the World Bank are the fruit of experience acquired in the course of appraisal and implementation of some 5,000 projects, including 370 education projects, an experience systematically built up and taken advantage of through retrospective evaluation of each project. These criteria provide for appraisal of a project as a function of its priority for the country's development, of its chances for success, and of its efficiency. Therefore we can classify them as *priority, feasibility and efficiency criteria.*

We now review these various criteria,[1] and we refer, by way of examples, to the conclusions of an analysis of twenty retrospective evaluations of projects executed in different French-speaking countries of Africa.[2] Boxes 1 and 2 summarize the history of two typical projects, and illustrate some of these conclusions.

1. IIEP, Unit on the identification..., op. cit.

2. L. Jallade, *La conception des projets d'éducation : objectif et cadre du séminaire. Séminaire sur la conception des projets d'éducation, Petite Côte, Senegal,* Paris, UNESCO (ED/EFD), 1987; A. Magnen, *La conception des projets d'éducation et leurs résultats ; analyse de vingt rapports d'achèvement de projets 1968-1984. Séminaire sur la conception des projets d'éducation, Petite Côte, Senegal,* Paris, UNESCO (ED/EFD), 1987.

Box 1. *A successful education project*

The objectives that the government of G... set out to achieve with respect to education in 1976 were numerous and varied: extension of national languages and of productive work at the primary level; development of employment oriented practical training at the secondary level; improvement of the quality of education through better training of teachers and better equipment; establishment of a vast network of agriculture faculties in the rural environment. The government asked the World Bank for assistance in the achievement of these objectives. In the course of an identification mission in April 1976, the two parties reached agreement on a limited project, aimed at expanding and improving the quality of technical secondary education, which the Ministry considered to be an essential part of its programme, in accordance with two of the objectives mentioned above.

The project, prepared in May 1977 and appraised in November 1977, contained a single major component, namely the creation, near the capital city, of a complex of three institutions (an instructor training institute, and two secondary polytechnical institutes). The project financed the construction, furniture and equipment of the premises of these institutions, as well as substantial technical assistance for the development of teaching curricula and for the training of national trainers. The project was financed by a 90 per cent World Bank loan and a 10 per cent contribution from the government.

The project was implemented within the planned time period, without over-running its budget, with no change in content and with successful results.

At the time of project completion, the buildings and equipment were considered to be of good quality and suitable for the activities of the institutions. However, the buildings and equipment suffered from inadequate maintenance.

The nine technical assistance experts ensured satisfactory elaboration of training curricula and modules for the three institutions, as well as training of national teachers and instructors. The pedagogical performance of the experts was good, but the technical level of two of them was considered insufficient.

The good execution and the positive results of the project are attributed to the convergence of several favourable factors:

(1) the project consisted of a single major component, and came under the responsibility of a single Ministry;
(2) the project implementation unit enjoyed the Minister's constant and effective support, because of the high priority accorded by the government to the development of technical education;
(3) the project was monitored regularly, every six months, by supervision missions;
(4) the construction work was concentrated in a single location and entrusted to a single contractor;
(5) technical assistance for this polytechnical complex was provided by a single firm of consultants.

In summary, the good results of this project are due to two main factors, namely its conformity with the government's education policy, and its simplicity, suitable for a country without experienced administrators.

Priority criteria

The priority of a project is expressed by its objectives. Given the limits of available resources, and the virtually infinite character of needs to be satisfied, logic demands that priority be given to projects that are well *justified*; in other words, whose objectives:

- are clearly set out and consistent with one another;
- respond to needs or to a demand that are well defined and of recognized importance;
- are in conformity with the national education development policy and plans.

The retrospective evaluation of education projects shows that meeting these requirements is also a significant success factor. This is clearly the case in French-speaking Africa. It is easy to understand that a lack of precision of the objectives of certain projects can lead to misunderstandings between government departments, donor and technical assistance, or to the implementation of pre-investment studies that then turn out to be useless. In other cases, the simultaneous pursuit of incompatible objectives has prevented the main objective from being achieved: as in the case of teacher training colleges leading, at the student's choice, either to teaching employment, or to continuation of studies in the post-secondary level.

Box 2. *A partially unsuccessful education project*

In 1968, the priority educational objectives of the government of C... were very general: expansion and improvement of primary, general secondary and technical education. Two identification missions of the World Bank and UNESCO held discussions with the national authorities about investments that could be financed by a World Bank loan, and about the components of a future project. The project finally agreed to by the two parties in September 1969 had as principal objectives the moderate expansion and qualitative improvement of different types of secondary education, especially in so far as the sciences and practical education were concerned; and increasing the number of middle level cadres for education and industry. Six components were included:

(1) the extension of a Secondary Teacher Training College;
(2) three new Primary Teacher Training Colleges;
(3) five new General Education Colleges (lower secondary) and the expansion of three others;
(4) six new General Education Lycées (upper secondary) and the extension of another;
(5) one new Technical Lycée, the extension of a second, and the re-equipment of two existing Technical Colleges;
(6) extension of the National Post-Secondary School of Agriculture.

Each component included construction or renovation of buildings, delivery of furniture and equipment, and provision of technical assistance and scholarships for training abroad. A project execution office was created within the Ministry of Education.

Project implementation was planned over five years. In actual fact, it lasted more than nine years. In addition to the initial allocation, it required a further injection of 1.2 million dollars and deep cuts in the project's components: the Secondary Teacher Training College was postponed to the next project, and expenditure for technical assistance and equipment was reduced, which had negative consequences for the quality of education.

The project's results were relatively disappointing. The main result was to increase general secondary education enrolment, but this enrolment exceeded the project targets by 65 per cent. The qualitative results were minimal, largely because of over-population of the premises; the desired diversification did not occur for lack of appropriate teachers and equipment.

The three Primary Teacher Training Colleges created by the project were under-utilized, due to the proliferation of similar schools, contrary to the project's objective which was to concentrate on teacher education. The number of teachers made available by these schools to primary education was less than foreseen, because many of the graduates were admitted to further studies.

The planned enrolment in technical schools was achieved, but most graduates continued studies at the higher level, contrary to expectations. The quality of education was barely improved, because of the shortage of qualified teachers, and of the absence of liaison with employers.

At the Post-Secondary School of Agriculture, the project's investment was too small to have more than a minimal impact.

The project did enable the implementation office to acquire useful experience.

The project's retrospective evaluation attributes its partial failure to two main factors:

(1) There was little participation by the government in the project elaboration, both because the World Bank wished to accelerate the process, and because the government was unfamiliar with World Bank procedures; the result of this lack of consultation was a series of misunderstandings between the two partners as to the project's objectives, content and means, which increased execution delays and put into question certain decisions that one or other of the partners had thought were firm;

(2) The project was both too ambitious for a relatively undeveloped education environment, and too complex for a relatively inexperienced administrative staff, despite the effort made by the World Bank to supervise execution closely.

The demand for training has also played an important role in the success of projects: all general education institutions created by projects have been fully utilized, but the same is not true of agricultural schools. As for non-formal education institutions, their rate of utilization has often remained extremely low, because of weak demand from targeted parents and young people.

Finally, conformity of a project's objectives with the national education policy has had a great influence on its results, especially when the project was aimed not just at raising school attendance, but also at making changes in the quality of education, or at

introducing innovations. Several projects aiming to improve the quality of scientific teaching in secondary schools, in Senegal for example, or the quality of technical education, as in Guinea, succeeded because their objectives were supported by a firm political will. On the other hand, failure has been observed in certain projects designed to introduce innovations, when they were suggested by foreign experts without sufficient consultation with the national authorities, which accepted the projects half-heartedly in order to obtain sorely needed financing, but did not always extend enough support for the implementation of the proposed innovations. This was the case, for example, with the enrichment of the curriculum of Koranic schools in Mauritania, and also with teacher retraining in the Congo.

Feasibility criteria

Experience has taught us many lessons about the feasibility conditions of education projects, in educational, technical, socio-political, administrative, institutional and financial terms. For each of these aspects, it has been possible to draw up feasibility criteria, which are applicable in the design of projects and of their implementation strategies.[3] Experience also points to the necessity of preparing projects in detail before their execution, taking into consideration these same criteria.

Educational feasibility. The educational design of a project sits in two dimensions, the qualitative and the quantitative. In qualitative terms, it requires the elaboration of a strategy for improvement of education quality and/or efficiency; this strategy sometimes includes the introduction of pedagogical innovations. In quantitative terms, an educational expansion project raises a large number of issues concerning, in particular, the pupils, the staff and the production of teaching materials.

The appraisal commission ensures that the strategy is both well designed from the pedagogical point of view, and suitable for the local context. It verifies that the project is designed and planned in a detailed and coherent fashion, institution by

3. L. Jallade, op. cit.

institution, to achieve its objectives. The commission pays particular attention to teaching staff, and makes sure that the project includes provisions for staff training, if needed. If technical assistance is called for, it ensures that this assistance, which is generally very expensive, is really necessary and its objectives carefully specified.

The evaluation of projects in French-speaking Africa confirmed the importance of educational feasibility criteria. We have seen the problem of insufficient demand for certain types of training. This problem is also pertinent to the educational feasibility of institutions.

As far as staff are concerned, technical assistance has made it possible to obtain qualitatively good results in technical, vocational and agricultural education components of projects. But it has not always ensured the training of nationals, especially because of the instability of counterparts. And training needs have sometimes been under-estimated.

The introduction of pedagogical changes and innovations, even when supported by a firm political will, has often encountered serious difficulties. Proposed changes have run up against socio-political obstacles, and their implementation strategy has sometimes been neglected in project elaboration.

Technical feasibility. The main criteria of technical feasibility have to do with buildings, furniture and equipment, including school books and materials. Buildings, the most costly capital outlay in most education projects, are usually scrutinized very closely. A commission in charge of appraising an education project must check that the buildings, furnishings and equipment called for are appropriate for the objectives of the project, that their quality ensures sustainability, and that their cost is reasonable. This last point, which is related to efficiency criteria, is particularly important. The appraisal commission must also make sure that the planned procedures guarantee the quality of work and supplies, the meeting of deadlines, impartiality of bid awards and proper expenditure control.

In the countries of French-speaking Africa, the planning of construction, furniture and equipment has almost always proved satisfactory, because of the experience acquired in this domain. Considerable delays in completion, and non-conformity of certain types of equipment have mostly been the result of shortcomings in national administrative capacities. The quality of construction has generally been good.

Socio-political feasibility. A project cannot achieve its objectives under good conditions if it is not socially and politically acceptable. It is up to the appraisal commission to verify that the groups concerned by the project (pupils, parents, teachers, and employers if vocational training is involved) are not opposed to its objectives, to the measures it contains and to the repercussions it is likely to generate. The commission also ensures that the project provides for prior sensitization and information of the interested parties.

The experience of French-speaking Africa underscores the influence of socio-political factors on the success of projects, especially when they include changes or innovations. In the Congo, it was not possible to introduce manual work into teacher training colleges because of opposition from pupils and teachers, whereas in Senegal the development of scientific laboratories in general education was a success because the teachers were well motivated. In Benin and in the Congo, technical schools did not succeed in co-operating with employers, because of the latter's reticence; but the same objective was achieved in Zaire, where industrialists were open to such co-operation.

Administrative feasibility. The most important criterion of administrative feasibility has to do with the capacity for project implementation. The appraisal commission verifies that the complexity of the project is well adapted to existing or potential administrative abilities. It makes sure that appropriate recruitment and training measures will be taken to strengthen these abilities if required. It also examines the compatibility of administrative modalities and of the project's timetable with prevailing legislation and procedures, in order to avoid excessive delays.

Finally, it studies the appropriateness of the monitoring and evaluation system, with a view to giving project implementation a certain degree of flexibility, and to preparing the way for drawing lessons from it.

The shortage of experienced administrative staff has been one of the main causes of deficiencies of education projects in French-speaking Africa. In fact, education administrators are often teachers without sufficient administrative training. Project implementation units encountered both major difficulties of co-ordination among the various interested ministries, organizations and enterprises, as well as some difficulty in simultaneously executing thousands of necessary tasks. Similar problems arose with the management of those institutions whose organization was not in line with usual standards.

In a general way, simple projects including only two components turned out to be better adapted to the limited administrative capacities of African countries than complex projects.

The implementation of education projects in French-speaking Africa frequently suffered from significant delays, resulting in considerable cost increases. It was sometimes necessary to eliminate several items in a single project, in order to keep its total cost within reasonable limits. Because of the absence of an appropriate monitoring system, this elimination was often carried out somewhat blindly, and to the detriment of intellectual investments, which were at a less advanced stage of implementation. Therefore it is easily understandable that, in terms of education quality, the project's results suffered.

Institutional feasibility. It is essential to make sure that the project is designed in such a way that the institutions created and the changes introduced are sustainable, in other words that they will be able to continue after the project's completion. *Sustainability* depends above all on three factors: the national education policy, staff competence and the operating budget. The first two factors are related to priority, educational feasibility and administrative feasibility criteria. As for the third, it concerns the project's

financial feasibility, which is dealt with below. When verifying the project's priority and feasibility, the appraisal commission pays particular attention to these institutional aspects.

In French-speaking Africa, the sustainability of schools and institutions assisted by education projects seems uncertain: three-quarters of them have little chance of being able to function under good conditions after the end of external aid. The main cause of this uncertainty is the weakness of operating budgets. This underscores the importance of the financial feasibility criterion in the appraisal of projects.

Financial feasibility. Many education projects have suffered in the past from under-estimation of the financial resources needed for their implementation. On the other hand, the capacity of national budgets to support recurrent costs generated by projects has often been over-estimated, leading to even more serious consequences, especially for the quality of education, as teaching materials are often the first expenditure to be sacrificed in the event of budgetary restrictions.

Striving to minimize these difficulties, appraisal commissions look through capital and operating cost estimates with a critical eye, avoiding any excess optimism.

In French-speaking Africa, all the evaluation reports state that the operating budgets of institutions created by projects are insufficient to ensure the maintenance of facilities. Budget shortfalls often do not make it possible to maintain the quality of education, or to extend to the national level the improvements made locally through projects. Unfortunately, these negative consequences have been aggravated in the last few years.

While financial constraints have been well analysed in sectoral education studies, the long-term implications of proposed reforms have not always been examined in depth. And projects have not always been designed with the concern of minimizing operating costs to be borne by governments, for example by planning facilities and equipment with low maintenance costs.

Efficiency criteria

As the resources available for investment are limited, every project must use these resources with maximum efficiency. Therefore, commissions responsible for appraising a project seek to minimize its cost with respect to the expected benefits. In economic sectors such as transport or agricultural development, cost-benefit analysis is used for this purpose. In the field of education, where the use of this technique is controversial, it is rarely applied, and the same is true of cost-efficiency analysis. Nevertheless, the spirit of these techniques often guide the work of appraisal commissions. They may thus compare the costs and expected results with those of recent projects similar to the one being examined, and look for alternatives less costly than the ones being proposed.

Appraisal commissions also seek to reduce costs by avoiding overlap, by taking advantage of economies of scale, and by studying the opportunities for co-ordination among several projects. Finally, they examine whether it is possible to use the facilities, staff and other resources in a more efficient manner.

For a project to succeed, it is by no means sufficient for it merely to respond to recognized needs. In addition, it requires political support, especially when its purpose is to introduce or disseminate innovations. Last, but by no means least important, its justification and its implementation conditions must be studied in a detailed fashion, taking into consideration the lessons of experience, as reflected in the appraisal criteria. We now examine this detailed study, which is carried out in the course of the identification and preparation stages.

Identification of education projects

The purpose of identification is to make a selection among several projects, and opt for those that are justified by indisputable priorities, that are in line with national policy orientations, and that seem likely to be feasible.

An education project can be justified by a high priority need of the society -- for example, demand by parents for new primary schools, or a dearth of engineers. Another type of justification might be the need to solve a serious problem confronted by the education system, such as poor achievements of pupils. In addition, the project is feasible only if the country has enough human and financial resources for its implementation.

Therefore, before identifying projects, it is necessary to analyse the educational situation, its socio-economic context and the government's policy.

Education sector studies

Such an analysis is generally called an education sector (or sectoral) study. This may be a general study of the entire sector, or several partial analyses aimed at updating or filling in a previous study.

The approach adopted in such a study is that of education system diagnosis. It consists in first collecting and analysing data about the system and the way it meets the society's needs. On the basis of this analysis, the study proposes an education development strategy within the framework of the national policy's broad thrusts. These proposals are translated into a number of project priorities or areas, which concern either education sub-sectors, such as the training of primary education teachers, or services of interest to the system as a whole, such as the production and distribution of school textbooks, or the planning of human resources.

To be realistic, the proposed strategy must be consistent with the country's possibilities: the additional personnel and operating costs resulting from its implementation must not exceed foreseeable resources. Otherwise the proposed strategy risks increasing the education system's dependence on foreign aid. On the other hand, the financing of capital investments by external sources results only in temporary dependence.

Thus an education sector study involves a series of analyses pertaining to:

(a) the country's socio-economic situation, especially that of human resources and employment, and the general objectives of national development;
(b) the public finance situation, the costs and financing of education;
(c) the national education policy;
(d) the situation and the main problems facing education;
(e) the prospects for education development over the next ten or fifteen years;
(f) the implementation strategy of the national education policy, and the priorities flowing therefrom.

As shown by this list, an education sector study does not study this sector in isolation, but within the broader context of socio-economic development. It seeks to pin down not only the society's educational needs, as they can be predicted from development projections, but also the demand for education by pupils and families. In this respect, it takes advantage of the usual planning techniques: evaluation of manpower needs, calculation of the rates of return of various levels and types of education, graduate tracer studies, international comparisons, etc. Since these estimates are not without difficulties and open to criticism, several different techniques are used and the results compared.

At the present time, when national budgets are subject to strong pressures, the financing of education is, even more than in the past, a crucial area of investigation in a sectoral study. For this purpose, classical techniques of financial analysis are used: analysis of total and unit costs, international and regional comparisons, etc.

The centre-point of an education sector study remains the analysis of the problems of the education system itself. The most frequently encountered problems concern:

(a) access to education and equality of opportunities: for example, a low rate of school attendance in primary education, or a certain degree of inequality in school access among geographical regions, between towns and rural areas, or between the sexes;
(b) the internal efficiency of education: for example, high rates of drop-out and repetition;

(c) the external efficiency: for example, a shortage of accountants or agricultural extension workers, or unemployment of post-secondary education graduates;
(d) the quality of education: for example, poor achievement of pupils, unsuitability of the curriculum to its goals or teaching in a language other than the mother tongue, scientific education without any practical application, or unavailability of school textbooks;
(e) the teaching staff: for example, a pupil/teacher ratio that is too high or too low, a shortage of qualified teachers, or the use of a large number of expatriate teachers;
(f) the administration of education: for example, weakness of education inspection services, of planning or statistics, or poor organization of project implementation;
(g) school buildings and equipment: for example, dilapidation and poor maintenance of schools, buildings unsuitable for the climate or education requirements, inadequacy and/or poor condition of furniture, or inadequate utilization of laboratories.

To analyse these problems, a precise description is not enough. It is also necessary to study:

- their causes, so as to be able to propose appropriate solutions;
- their educational, social and economic consequences;
- the obstacles to their solution (human and financial resources, legislation, administration).

Analysis techniques common in educational planning are used for this purpose: calculation of enrolment rates, analysis of school drop-out and output, curriculum development techniques based on objectives, international comparisons.

One of the most delicate tasks of a sectoral study is projecting the development of an education system, since this is dependent on internal variables, as well as on external ones. Hence it is advisable to prepare alternative projections, taking into consideration the different development strategies, and different possible evolutions of the socio-economic environment. For this purpose, computerized simulation models, such as the UNESCO EDSTATS model, or EDFISIMO popularized by the World Bank,

are increasingly used. The latter model, whose main variable is unit cost, is particularly appropriate for financial crisis situations.

The strategies proposed by an education sector study are normally accompanied by comments on their feasibility, and by a list of priorities in order of importance. These priorities or project areas can pertain either to education types or levels, or to functions or services of significance for the entire education system. By way of illustration, Box 3 summarizes a sectoral study carried out in 1981 by the Ministry of Education of an African country with the assistance of UNESCO, and the project identified following the study.

Justification and design of projects

Once priorities have been identified and approved by the government, planners are in a position to select projects, to specify their justifications, their objectives and the broad outline of their design, and to make initial cost estimates. This is the purpose of project identification as such.

Before its identification, a project is usually just an idea. Project ideas can stem from various sources: central or regional public departments (especially the Ministry of Education), sectoral studies, bilateral or international aid organizations, private initiatives.

Justification and objectives. The first task of project identification consists in specifying the justification of selected projects, by describing the priority needs or problems they meet, and in establishing their conformity with the national education policy. It is clear that justification is better documented and more objective if it is based on an education sector study.

A project's justification can be social (for example, to increase the primary school enrolment rate), pedagogical (to improve the quality of education), economic (to meet a demand for qualified manpower), or financial (to reduce unit costs by constructing larger classrooms to increase the pupil/teacher ratio).

Box 3. *Summary of an education sector study and of the identified project*

1. *Present situation*
Very poor country
Low GDP growth
98 per cent illiterate farmers
Too many civil servants
Finance
Large budget deficit
Education = 33 per cent of budget
High unit costs

2. *National education policy*
(a) Provide basic education for all
Education reform:
- ruralization (productive work)
- national languages

(b) Train skilled manpower for development

3. *Education problems*
3.1. Basic education
20 per cent school attendance rate
Slow extension
Poor quality

3.2. Literacy training under- developed (3 per cent of illiterates)
Low motivation
Cheap.

3.3. Vocational training
Sufficient capacity
Poor quality
Shortage of means
2nd project schools uncompleted
Weak central administration.

3.4. Secondary and post-secondary

4. *Strategy*
General objectives
- Accelerate reform of basic education
- Moderately expand basic and literacy education through savings in secondary and post-secondary
- Consolidate vocational training
- Strengthen planning and administration priorities

4.1. Basic education
- Concentrate effort on quality and reform for five years
- Then 5 per cent growth per year requiring:

5. *Identified project*

	Cost (million of francs)
A1. Basic education reform: Experimentation, evaluation, extension of reform; Equipment, technical assistance, operations, training	600
A2. Teacher's colleges: Construction, furnishing, equipment	2 400
A3. Literacy: Extension literacy and post-literacy; Equipment, operations, training	600
B1-B2. Completion 2nd project schools: Construction, furniture, equipment, scholarships, operations	3 200
C1. Creation of Technical and Vocational Education Division in Ministry of Education: construction, furniture,	

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education Excess capacity with respect to manpower demand.	• more teachers • school map	equipment, operations	600
		C2. Completion of 1st project schools: Renovation, construction, equipment, scholarships, technical assistance	800
3.5. Educational planning Poorly trained officials Lack of equipment and means.	4.2. Literacy campaign • Extend to new regions • Develop post-literacy	D. Educational planning: Equipment, scholarships, technical assistance (school map)	900
		E. Project administration	500
		Contingencies and inflation	4 800
	4.3. Vocational training • Complete 2nd project schools • Create Technical and Vocational Education Division • Renovate and support 1st project schools	Total investments	14 400
		6. *Recurrent costs* Teacher's colleges 700 pupils	280
		Employment of graduates 300 x 0.75	220
	4.5. Educational planning • Strengthen the Department • Train administrators	Vocational schools 200 pupils x 0.8	160
		Ministry of Education services 25 civil servants x 2	50
		Total recurrent costs (i.e., 2.4 per cent of 1981 education budget)	710

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Project justification often requires surveys of potential beneficiaries, to make sure that needs are real, to specify and quantify them.

The definition of *objectives* is an integral part of the project's justification. A distinction is made between quantitative expansion objectives, which have to do with increasing school enrolment, educational reform objectives, which aim to improve the quality of education through changes or innovations, and institutional objectives, whose purpose is the creation or strengthening of institutions, schools or departments contributing to the education system's development.

The definition of a project's objectives is of capital importance for its future, because the resulting decisions may be irreversible. Explicitly and clearly formulated objectives avoid misunderstandings and promote co-operation among future project officers. If there are several objectives, it is necessary to be sure of their compatibility.

A project is feasible only if its objectives are realistic, and if its effects are sustainable; in other words, only if the expected results have a good chance of being achieved, and then maintained after completion of project implementation. Many projects have failed in the past because of unrealistic objectives. To judge the realism and durability of a project, planners need a lot of experience. They must obtain information about the outcome of similar projects, executed within the country and in neighbouring countries, and about obstacles they encountered.

A project's chances of success are greater if its complexity is in line with the management capacities of national cadres. A priori, in countries lacking experienced administrators, a simple project with a limited number of objectives has better prospects than a complex project (see Box 1 above).

The objectives of a project should be quantified to the extent possible. They are then translated into one or several 'targets' (for example, to improve the training of 10,000 under-qualified teachers). They can be expressed in the form of "expected results" (for example, at the end of the project, 60 per cent of working teachers will be able to teach in the national languages). The concrete expression of objectives as quantified targets and

expected results offers two main advantages. By making it possible to measure progress in the course of project execution, it facilitates personnel motivation. And above all, it allows for more precise and more objective monitoring and evaluation, an advantage whose decisive importance will be stressed in Chapter IV.

Overall design of projects. Once the objectives of selected projects have been specified, the planners study their overall design,[4] that is:

(i) the strategy applied in their implementation;
(ii) the investments to be made for this purpose;
(iii) the approximate cost of these investments;
(iv) the order of magnitude of the annual recurrent costs to be supported by the government.

Sections 4, 5 and 6 of Box 3 give a summarized example of the overall design of a project.

A project generally includes physical investments (construction, furniture, equipment and supplies) and intellectual investments (training expenditures, technical assistance, etc.). The former constitute the major share of the project when it pursues only quantitative expansion objectives, as was almost always the case about twenty years ago. The latter are often important in projects with qualitative or institutional objectives, which are now more numerous.

During the initial project design, planners may have to examine several alternatives, taking into consideration local or foreign experience and available research results. The advantages and shortcomings of these alternatives are compared in terms of foreseeable results, difficulty of execution and costs, in order to determine the most effective ones. For example, in order to improve the quality of education, is it better to strengthen teacher training or to provide children with school textbooks? To strengthen teacher training, should new teacher training colleges be created, or should teachers be trained in service? The use of cost-effectiveness analysis can shed light on the decision.

4. L. Jallade, op. cit.

As T. Malan[5] has pointed out, the search for and the proposal of alternative strategies may have no practical utility in some countries, given the weight of the Ministry of Education, which does not authorize questioning of the orientation set out by the Minister, given the lack of time for such studies, and given the difficulty of keeping them confidential. But budgetary rigour is now forcing many developing countries to overcome these obstacles, and to seek out cost-effective strategies.

Physical investments. The planners study the location and size of premises called for in the project, as a first approximation. They may decide to recommend a more detailed study of the school map before project preparation as such. They consider the appropriate construction quality: for example, should preference be given to durable, low-maintenance but costly buildings, or to less solid but inexpensive buildings? Similarly, as regards equipment, consideration must be given to its degree of sophistication and provision for maintenance? They examine various options for project administration (see Chapter IV), and for the operation of institutions created by the project: for example, should a vocational training centre have a board of trustees with employer representation?

Intellectual investments. If national personnel is insufficiently qualified or experienced, planners study ways and means of providing training, and the advisability of resorting to external technical assistance to reinforce it, and possibly to intervene in the execution of certain studies.

Recourse to external technical assistance, that is to foreign specialists or consultants, raises numerous problems and Third World governments are often opposed to it, especially if the assistance is not free, but financed by a loan. It is true that technical assistance is expensive, for an expert's salary can be as much as ten times that of a national senior civil servant. Moreover, while generally effective in operational tasks (teaching,

5. T. Malan, *Educational planning as a social process*, Paris, UNESCO: IIEP, 1987.

management, planning, etc.), technical assistants have certainly not always provided good training of national personnel. Finally, many aid sources, and bilateral ones in particular, offer free technical assistance, especially in small countries. Thus it is well to exercise caution in the identification of a project's technical assistance needs. While these disadvantages are very real, they may turn out, in the final analysis, to be minor in comparison with a crucial need for external intellectual contributions to the development of under-equipped countries, as past experience has shown. Let us not forget that at the end of the last century, for example, Japan employed thousands of foreign engineers to launch its industrial development.

The success of technical assistance seems to depend on three often neglected factors:[6]

- agreement by all parties concerned (starting with the Minister) on the need for and the objectives of the assistance;
- elaboration of an action strategy for the technical assistance;
- preparation of a detailed but flexible programme for training and promotion of the staff in the department concerned.

These issues must be weighed as of the identification stage, and then reconsidered during preparation.

Here are a few other frequently posed questions: Is technical assistance indispensable? Would it not suffice to provide for training of national staff? Does the proposed assistance not duplicate an existing programme? Can the technical assistants be recruited among nationals? If foreign technical assistance is nevertheless necessary, how should its delivery be designed? Is it better to use experts who stay for several years, or consultants providing ad hoc assistance? Can it be provided free of charge by an aid source?

Training items to be included in the project also raise fundamental questions. Can training be provided locally or does it require sending candidates abroad, despite the brain drain risk? Can it be provided by technical assistance?

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6. F. Lethem and L. Cooper, *How to manage technical assistance in development projects*, Washington, D.C., World Bank, 1984.

Initial cost estimate. Identification requires a preliminary study of the project's costs. The acceptability of the foreseeable investment costs is verified, as well as whether their national or possible external financing does offer reasonable prospects. On the basis of such an estimation, it is possible to solicit a provisional commitment from funding sources.

One also makes sure that the project's recurrent costs can be borne by the national budget. As we have seen, this condition is indispensable for the project's success.

The preliminary financial estimates made at the time of project identification are based on average unit costs observed locally or in neighbouring countries. More precise and detailed costs are calculated at the preparation stage.

The design of educational reform projects.[7] Educational reform projects turn out to be full of pitfalls, for they imply changes in behaviour, on the part of pupils, teachers and administrators, that cannot be predicted with certainty. The human environment is often poorly understood, and strategies need to be tested and adapted to the local context.

As a result, educational reform projects are difficult to identify, in terms of objectives and overall design, with as much precision as other projects. They have greater inherent uncertainty, in other words a greater ultimate failure risk. But the risk is worth taking if it is reasonable, because innovation and change are at the heart of the development process. One strives to minimize the risk by anticipating obstacles, and by closely monitoring reform implementation. This involves formulating the project in an exploratory manner, with sufficient flexibility to allow for subsequent adaptation to the observed evolution. For example, it may be useful to provide for:

- surveys of future beneficiaries and participants, in order to assess the acceptability of reforms before their implementation;
- public opinion campaigns to make them popular;
- an experimental phase to develop appropriate pedagogical methods.

7. A.M. Verspoor, op. cit.

Methods used to identify projects

Education sector studies and project identification require varied expertise, particularly in education and in economics. Consequently, such studies are usually entrusted to multi-disciplinary teams formed by educational planning departments. Depending on the requirements, teams may include: a planner and one or several education specialists (primary, secondary, post-secondary, technical, agricultural education); a specialist in curriculum development; one or two economists (human resources, finance); and sometimes other specialists as well (for example, in sociology, school construction or textbook production). Like any other team effort, education project identification requires co-operation and dialogue among the different specialists. Co-ordination often falls on the educational planner or the economist, given the central role of their disciplines.

Education project identification involves collecting available data, visiting schools, and engaging in numerous consultations. It requires confirmed experience with and good practice of the techniques of educational planning. The work is based very closely on the appraisal criteria that condition project approval.

An education sector study or project identification effort cannot rely solely on the analysis of documents collected in the capital city. The team must contact a number of schools, training centres, and central and regional administrative offices, in different regions of the country. It should interview not only education sector civil servants, but also teachers, pupils, parents, etc. Since the education system is an integral part of the country's socio-economic fabric, the team must also consult experienced officials from other sectors (ministries of the economy, planning, finance, labour, agriculture; public and private enterprises; municipal councils; rural groups; etc.).

The project identification report generally includes proposals for its preparation, and in particular a timetable, which may provide for the execution, before project preparation as such, of *pre-investment studies*, aimed at shedding light on specific issues, for example: the prospective school map; the demand for a specific type of education; employment opportunities for

graduates; curricula; the future organization of an institution; a particular aspect of education financing. These studies in fact constitute the first phase of preparation, which we will now consider.

Preparation of education projects

We recall the two essential goals of preparation:

(a) presenting the project in detail for appraisal by financing decision-makers;
(b) planning its implementation, for timely completion and proper achievement of the expected results.

As it is implementation oriented, preparation is realistic and concrete in nature. It requires a systematic, long and costly effort extending over one or more years. Three phases can be distinguished:

(a) the *pre-investment studies* discussed above;
(b) drafting of the *project document* or preparation report, setting out the project's objectives, composition, costs and organization;
(c) the *detailed technical elaboration.*

The latter is aimed at preparing architectural timetables and drawings, equipment lists, tender documentation, drafts of regulations, post descriptions, detailed curricula, etc. All these items are necessary to start implementing the project: construction of buildings, ordering furniture, equipment and supplies, recruiting teachers and pupils, and opening classes. The detailed technical elaboration often takes one to two years. We shall not look at it here, because it is more the business of architects and procurement specialists than of educational planners.

On the other hand, it is the business of planners to draft the project document, which takes about one to three months. We now turn to this phase, the most decisive of the preparation stage.

Purpose and contents of the project document

In order to fulfill its function, the project document must meet the priority and feasibility criteria discussed above. This leads the preparation team to ask a series of questions:

- is the project justified by priority needs or problems?
- does it respond to a demand on the part of future beneficiaries?
- is there a sufficient demand for graduates?
- is the project in conformity with national policies?
- is it educationally well designed?
- is it sound from the architectural point of view?
- is it socially and politically acceptable?
- is its complexity in line with the administrative capacities of national staff?
- will the institutions created or the improvements introduced be lasting?
- is the project feasible in financial terms?

In order to provide valid answers to these questions, the project document should present a considerable amount of information pertaining to the project's socio-economic environment; to its objectives; to its overall design; to the schools and institutions created, improved or assisted; to the planned investments; to personnel; to capital costs; to recurrent costs; to the planned organization. In order not to leave out anything essential, one can refer in each section of the report to the classical questions in Quintilian's hexameter: "Who, what, where, when, how, why?" -- often abbreviated to "W W W W H W" for ease of memory.

UNESCO, UNDP and the World Bank have prepared guides and standard lists of points to be considered in education project preparation (see Box 4 for an example). These lists are a very useful tool for making sure that nothing important is forgotten, but they should be adapted to the type of project to be prepared and they cannot replace an integrated project design effort.

Preparation of the project document

Almost all the comments made about project identification pertain also to preparation. The issue of complexity arises not just for the project as a whole, but also for each of its components.

Box 4. Table of contents of a project preparation document

Text	*Appendixes*	*Responsibilities* *
1. *Justification*		
1.1. Present situation of the sub-sector		ED (ECO)
1.2. Government policy		ED
1.3. Problems and needs		ED (ECO)
2. *Objectives*		
2.1. Statement of objectives		ED
2.2. Overall design of the project		ED
2.3. Results expected at the end of the project		ED
3. *Assisted institutions*		
3.1. Organization		ED
3.2. Enrolment (or production)	3.21. Enrolment breakdown	ED
3.3. Curriculum (or activities)	3.31. Weekly timetable by type of premises	ED
3.4. Methods		ED
3.5. Location		ED + ARC
3.6. Staff	3.61. Teaching staff	ED + ECO
	3.62. Non-teaching staff	ED + ECO
3.7. Other		

4.	*Items to be funded and costs*		
4.1.	Construction	4.11. Teaching loads and premises	ED (ARC)
		4.12. Schedule of accommodation, areas and costs	ARC (ED)
		4.13. Basic space standards and characteristics of premises	ARC
4.2.	Furniture, equipment, materials	4.21. List of furniture	ARC (ED)
		4.22. List of equipment and materials	ED (ARC)
4.3.	Technical assistance	4.31. Technical assistance and costs	ED (ECO)
		4.32. Terms of reference	ED
4.4.	Personnel training	4.41. Training expenditure	ED (ECO)
4.5.	Other		
4.6.	Summary of costs to be financed	4.61. Summary table of costs	ARC
5.	*Administration of the project*		
5.1.	Organization and procedures		ARC
5.2.	Monitoring and evaluation		ED (ARC, ECO)
5.3.	Implementation schedule	5.31. Implementation schedule	ARC (ED)
6.	*Feasibility*		
6.1.	Administrative feasibility		ED (ECO, ARC)
6.2.	Financial feasibility	6.21. Annual operating costs to be supported by government	ECO (ED)

* ED - Education planner or specialist; ECO - Economist; ARC - Architect. Brackets indicate partial responsibility.

Source: IIEP, Unit on the identification, preparation and evaluation of educational projects. Advanced Training Programme in Educational Planning and Administration, 1986. (Prepared in co-operation with the Educational Financing Division, Unesco).

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Experience demonstrates the advantages of a simple design, well adjusted to the management capacities of the national administration. Staff, structures and procedures cannot change from one day to the next merely by decree, even if the project provides for actions that improve them. The proverbial principle of "not biting off more than one can chew" is appropriate, and striving too hard for perfection can compromise the project's issue.

On the other hand, excessive pruning can result in eliminating components indispensable for a project's success, an example being training sessions for the staff. It is sometimes delicate to strike the optimum balance between simplicity and effectiveness.

At each step of the preparation, it is useful to ask oneself whether the components are not too numerous, and whether the component being elaborated is not too complex. This can lead to questioning certain decisions taken at the identification stage, if preparation shows that they result in excessive complexity.

The preparation of certain components may require comparing several options, in order to select the best, or the one offering an optimum balance between cost and effectiveness. For example, is it better to replace dilapidated classrooms or to renovate them? To construct buildings on forced account or to bring in contractors? To construct staff housing, or to rent existing accommodation? To use local (less expensive, but less durable and more demanding in maintenance) or imported techniques and materials? To establish a printing shop for the production of school textbooks, or to have them printed by existing private firms? To organize training sessions in the capital or in regional centres? etc.

Preparation requires detailed study of each component of the proposed set of activities. In particular, it strives to foresee difficulties that may crop up, so as to facilitate their solution in advance. A priori optimism is not the order of the day; it is better to act as if the worst *was* always certain, contrary to Claudel's dictum. The search for an acceptable balance between realism in the anticipation of problems, and the cost moderation imposed by scarcity of financial resources is sometimes tricky. It is, of course, a question of experience.

Nevertheless, however much care is put into its elaboration, it is illusory to think that the preparation document can foresee all the events that may occur during project implementation, whether in operational or financial terms. Therefore a project always includes a provision for physical contingencies, normally about 10 per cent, and a provision for price increase (or inflation), which depends on the circumstances. The contingency provision is generally higher for project components aimed at educational change and intellectual investment, since their margin of uncertainty is greater.

Circumstances can bring about project revision in the course of implementation. For example, in the case of projects aimed at qualitative change, the objectives and strategy may turn out to be unrealistic and require modification. Or in the case of devaluation of the national currency, or of unforeseen execution difficulties, the contingency and inflation provisions may be insufficient to meet all needs; it is then necessary to revise the operational plan, and to reduce or even to eliminate certain project items. Thus one could in fact say that preparation continues during project implementation.

If project officers have an adequate flow of information about the project's execution and preliminary results, in other words if project *monitoring* is well organized, or better still, if the project has been subjected to an on-going *evaluation*, the project can be revised in an optimal way, taking into consideration the first results obtained. One then keeps the items that are essential to achieve the project's basic objectives. In the opposite case, intellectual investments, more difficult to implement and more uncertain, are generally the first victims of any revision, which compromises the effort to improve the quality of education.

To what level of detail should project preparation go? The classical methods of preparation were designed for infrastructure and energy projects: roads, railways, ports, dams, etc. Given the enormity of such works, a detailed design change can generate substantial additional expenditure, or extend the execution period very considerably. Thus such project documents are prepared in minute detail. In the case of education, they indicate precisely the surface areas and characteristics of premises to be constructed, and

provide the list of necessary equipment. There is more diversity as far as intellectual investments are concerned, given the need to maintain a certain degree of flexibility in the face of imponderables. Nevertheless, apart from the conceptual implementation outline, the corresponding documentation must provide the basic data needed to justify and calculate expenditure on studies, staff training, technical assistance, etc.

As shown in Box 4, the project document generally contains information and analyses pertaining to:

- the project's justification and objectives;
- the institutions assisted by the project;
- the items to be financed by the project and their costs;
- project administration;
- the project's feasibility.

To make the text less cumbersome and easier to read, tables of figures generally appear in appendices.

The project document partly echos the contents of the identification report. This is true in particular of the project's *justification and objectives*. However, these are updated, completed or revised, especially when important changes have occurred in the government's policy, or when identification was too hasty. If a recent sectoral study is available, the project document refers to it for more detail on the situation of the sub-sector or institutions concerned.

Assisted institutions. This part of the document analyses the nature and functioning of the institutions concerned, and any changes introduced by the project. It includes a *prospective school map* of existing or future establishments, which studies not only their location, but also their organization; the characteristics of the pupil, student or trainee population; the curricula; the pedagogical methods; the management and support staff.

This analysis provides all the information pertinent to the project's educational feasibility. For example, if the project concerns schools, it is necessary to indicate at what level and from what geographical area the pupils are to be recruited, and to demonstrate that the number of potential candidates is more than sufficient. If the revision of curricula is planned, the document

Table 1. Total teaching load and required facilities (example)

	Classrooms			Laboratories/audio-visual equipment			Workshops			Observation rooms		
	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd	1st	2nd	3rd
Number of sections per grade	3	3	3	3	3	3	3	3	3	3	3	3
Total number of periods per grade	60	60	60	15	15	15	21	21	21	12	12	12
Total number of periods per type of facility		180			45			63			36	
Number of teaching units (units needed per type)		6			2			2			2	
Hours per week							36 hours					
Use factor		83%			63%			88%			50%	

should mention the revision's strategy (including experimentation with revised curricula), in order to demonstrate its realism and validity, and to calculate the cost of the operation.

Analysis of the schools location should stress its suitability for the project's objectives, and for the operational needs of the institutions: communication; provision of drinking water and electricity; proximity for pupils to practical application opportunities in the case of vocational training, etc.

The project document includes the planned staff list for the institutions concerned; it indicates the breakdown of their functions, in order to demonstrate that the organization is conceived in a spirit of efficiency and healthy management. For this purpose it may calculate the average hourly load of teachers, as well as the pupil/teacher and pupil/non-teaching staff ratios. If available staff do not have the necessary qualifications, the document states the number of people to be trained in the different specialties.

Items to be funded and costs. Among the various items funded by an education project, *construction* often occupies the first place. Hence we shall explain in some detail the corresponding preparation method generally followed.

First the educators establish, on the basis of academic curricula, the *teaching load* (see Table 1) in hours or periods per week, for each type of facility (classrooms, laboratories, workshops, etc.). They then deduce the number of facilities needed, taking into consideration the school's weekly schedule, and a *utilization factor* of about 80 per cent, which gives the margin required for the proper management of school activities.

On this basis, the architects draw up the *schedule of accommodation areas and costing* (see Table 2), and a summarized architectural programme indicating the premises' characteristics. Surface areas and costs are estimated on the basis of prevailing standards in the country concerned, which are collected for examination by the appraisal mission if the project is funded by external aid sources. The architects sometimes propose alterations in the standards in order to make economies. Standard construction or renovation costs are multiplied by a *distance*

Table 2. Schedule of accommodation, areas and cost (Example). Teacher Training College - Enrolment: 480 boarders

Type of accommodation	Number of pupils per unit	Number of units	Net area in m²		Construction		Costs (in local currency)	
			Per unit	Total	Per m²	Total	Furniture	Equipment
Section I: Teaching and Common Services				*2 115*	*21 000*	*44 415 000*	*4 441 500*	*1 256 000*
Classrooms	40	8	60	480				
Science rooms	40	2	88	176				
Workshops	40	3	136	408				
Storage rooms		2	18	36				
Observation rooms	40 ÷ 45	2	120	240				
Library		1	132	132				
Administration		1	180	180				
Pupil washrooms		1	40	40				
Walls and circulation (25 per cent)				423				
Section II: Boarding				*3 331*	*21 000*	*69 951 000*	*4 611 600*	*2 403 000*
Dormitories	120	4	380	1520				1 728 000
Washrooms		4	160	240				
Dining room		1	210	210				
Kitchen		1	195	195				675 000
Foyer		1	100	100				
Walls and circulation (25 per cent)				666				
Total				5 446		114 366 000	9 053 100	3 659 000

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Table 3. Project recapitulation table (example)

Sector code number	Description	Number of new places by sector: Teaching	Number of new places by sector: Boarding	Buildings	Site development	Furniture
				1	2	3
A.	*Industrial vocational training*	-	-	*105 102*	*9 626*	*7 336*
1.	Secondary polytechnical institutes	-	-	105 102	9 626	7 336
2.	Central spare parts warehouse	-	-	-	-	-
3.	Revision of curricula	-	-	-	-	-
B.	*Planning of education and human resources*	-	-	-	-	*966*
1.	Ministry of Planning	-	-	-	-	163
2.	Ministry of Labour	-	-	-	-	277
3.	Ministry of National Education	-	-	-	-	526
C.	*Improvement in the quality of primary education*	*1 600*	*1 600*	*406 590*	*57 491*	*31 042*
1.	Technical assistance for National Pedagogical Institute	-	-	-	-	-
2.	Printing and distribution of school textbooks	-	-	14 292	1 623	440
3.	Teacher Training Colleges	1 600	1 600	392 298	55 868	30 602
4.	Retraining of regional education cadres and primary teachers	-	-	-	-	-
D.	*Strengthening of the Education Projects Department*	-	-	*640*	-	*444*
	SUB-TOTAL	1 600	1 600	512 332	67 117	39 788
	Contingencies (10 per cent)			51 233	6 712	3 979
	TOTAL			563 565	73 829	43 767
	Provision for price increases (28 per cent)			157 798	20 672	12 255
	GRAND TOTAL			721 363	94 501	56 002
	in thousands of Sylis			36 068	4 725	2 801
	in thousands of US dollars					
	Proportion in foreign currency: as percentage			80	70	100
	in thousands of US dollars			28 854	3 307	2 801

* Local currency ** To be supported by the government.

Total cost by sector (in thousands of Sylis)*

Equipment and materials	Professional fees	Total columns 1 to 5	Technical assistance and scholarships	Local expenses	Total investment columns 6 + 7 + 8	Percentage of total cost	Annual operating expenses**
4	5	6	7	8	9	10	11
97 711	*4 937*	*224 712*	*4 200*	-	*228 912*	*26*	*15 622*
95 111	4 937	222 112	3 600	-	225 712	-	14 910
1 800	-	1 800	-	-	1 800	-	398
800	-	800	600	-	1 400	-	314
4 369	-	*5 335*	*21 078*	*100*	*26 513*	*3*	*6 864*
1 176	-	1 339	7 644	100	9 083	-	1 368
1 176	-	1 453	2 988	-	4 441	-	2 577
2 017	-	2 543	10 446	-	12 989	-	2 919
49 811	*16 406*	*561 340*	*9 988*	*22 950*	*594 278*	*68*	*102 137*
-	-	-	7 078	-	7 078	-	6 072
34 360	676	51 391	2 910	-	54 301	-	9 680
15 251	15 730	509 749	-	-	509 749	-	86 385
200	-	200	-	22 950	23 150	-	-
5 883	-	*6 967*	*19 807*	*2 400*	*29 174*	-	*1 737*
155 774	21 343	798 354	55 073	25 450	878 877	100	126 360
15 777	2 134	79 835	5 507	2 545	87 887		
173 551	23 477	878 189	60 580	27 995	966 764		
48 594	6 574	245 893	16 962	7 839	270 694		
222 145	30 051	1 124 082	77 542	35 834	1237 458		126 360
11 107	1 503	56 204	3 877	1 792	61 873		
100	100	85	100	0	83		
11 107	1 503	47 572	3 877	-	51 449		

factor, to allow for the distance between the institutions and the sites of raw material production or unloading. To this must be added the cost of site development: roads, provision of water, electricity, telephone lines, etc. (see column (2) of Table 3). When drawing up the schedule of accommodation, areas and cost, architects often use computer software (spreadsheets), which facilitates the search for the most efficient solutions, as well as subsequent adjustments.

The architectural preparation of a project often requires choosing among several options. Problems connected with construction durability and maintenance require special attention. It is often advantageous to design low-maintenance buildings, since upkeep is neglected in many countries because of the chronic shortage of operating funds.

Furniture and equipment. Educators draw up lists of furniture and equipment needed to teach the curriculum, to furnish the premises, to do the administrative work, etc. Costs are established on the basis of the experience of previous projects, supplier catalogues and other appropriate references.

The preparation of these lists must take into consideration the economic and budgetary constraints. In countries where operating budgets are meagre, and where imports are subject to quotas, it is better to use locally produced or inexpensive teaching materials, provided this does not compromise the quality of education. Such materials are easier to maintain and replace once the project has been completed. Moreover, it is useful to foresee the financing of spare parts, supplies and consumable materials from the outset. It is preferable to keep this item modest, so that the national budget can take over after project execution.

Equipment holds a relatively important place in certain types of projects (technical education and vocational training, scientific post-secondary education, educational television, etc.). In this case the project document often contains only a general list. Time and specialized expertise are required to prepare complete lists, so these are prepared during detailed technical elaboration, with the assistance of teachers using such equipment, or other specialists.

Technical assistance and staff training. In the course of project preparation, planners provide more detail on the technical assistance and training strategy, as outlined at the identification stage; they work out the detailed programme of activities, and they quantify its cost. Here again, it is important to leave this programme some flexibility, to allow for possible re-orientation during project execution.

The programming of training and technical assistance components is sometimes neglected, because of the weight of material investments. The minimum includes specification of different domains of activity, calculation of the number and costs of man-months for experts, consultants, scholarship-holders, training course participants, etc. Inadequate preparation of intellectual investments risks compromising the project's success in terms of human resources development.

Preparation reports should include draft *terms of reference* of technical assistants (see Box 5), which should indicate, as clearly as possible but without excessive detail, the tasks to be fulfilled; the timetable and duration of services; the institutions to which technical assistance staff will be assigned; the breakdown of functions between technical assistants and national counterparts; the desired qualifications and experience.

A useful appendix to the preparation document is a training schedule for the staff of concerned departments or institutions, indicating in particular the date at which counterparts will be available, and their qualifications. This schedule is incorporated into the project's provisional implementation schedule. If recruitment of counterparts involves additional expenditures, these must be calculated and included in the additional operating costs generated by the project.

Preparation should also study the (national or foreign) sources of assistance, and the way of recruiting technical expertise: for example, will individual experts or a consultancy firm be used?

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Box 5. *Draft terms of reference of an educational planning specialist*[1]

General responsibilities: education planning (organize statistical data collection, work out the school map, determine the implementation costs of educational strategies).

Administrative authority: Ministry of Education, Department of Planning (DP).

Place of assignment: capital city, with travel to interior of country.

Duration of assignment: three years.

Starting date: as soon as possible.

Description of tasks:
Under the authority of the DP Director, and in liaison with other project officers, in particular those of the Department of Basic Education (DEF), the National Pedagogical Institute (IPN), and the Planning Ministry, the expert will:

(1) Study documents and reports, drafted by the Planning Ministry and the Ministry of Education, pertaining to possible educational strategies;
(2) Study existing statistical data, as well as the education budget;
(3) Study, in close liaison with basic education technicians, the currently experimented reform of the education system;
(4) Contribute to the establishment of a mechanism for education statistics collection, of the technical means for their processing, analysis and publication, following a timetable related to management needs;
(...)
(7) Propose timely additional studies he considers necessary in his sphere of competence;
(8) Monitor the development of training costs in different branches;
(9) Work out and update quantified scenarios (including, in particular, budgetary costs) corresponding to on-going or projected programmes;
(...)

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(12) Supervise consultants in the areas of school mapping and of educational financing, under the project;
(13) Select and prepare the curricula of DP candidates to a scholarship under the project;
(14) Train national counterparts.

Qualifications required
(1) Studies and/or experience in educational planning, in economics and in education sciences;
(2) Good knowledge of teaching and long experience in the field of educational planning and organization, especially in developing countries;
(3) Good knowledge of French, which will be the expert's working language;
(4) Aptitude for team work, at times under difficult material conditions.

Conditions of employment
The conditions of employment will be set out in a contract to be negotiated with the government, which reserves the right to sub-contract for the services of experts or consultants with other firms or organizations.

[1] Revised extracts.

The preparation of staff training components should preferably:

- justify the number of staff to be trained; this number should be greater than the number of posts to be filled, given the probable attrition;
- enumerate in detail the various activities (providing for some flexibility) and how they will be organized: locally or abroad; full-time or in short sessions; study trips; use of consultants for the organization of training courses; participation of senior personnel, etc.

Operating expenses. In the past, most education projects financed investments only. Recurrent expenditures required to achieve the objectives were left to the government's operating

budget. But in poor countries, or countries subject to severe budgetary constraints, national budgets often turned out to be unable to cover some of these expenses, in particular the purchase of supplies or the maintenance of investments. Nowadays, the education projects in the most disadvantaged countries that are financed through external aid almost always make provision for certain operating expenses which are indispensable for the implementation of investments. These expenditures are then considered as investments, and serve to cover the costs of such items as school supplies, the maintenance and operation of equipment supplied under the project, travel expenses of inspectors, bonuses, and sometimes even part of the salary of some key personnel, when they are paid on an irregular basis. For the sake of sustainability, project-financed recurrent costs should preferably be rather modest, in order that they may later be supported by national budgets or other funding sources.

Summary of costs. The preparation report summarizes all the project's capital costs in the form of a table, such as the one shown in Table 3. The project's administrative expenses, when borne by the project itself, are added to the capital costs. To be noted are the provisions for contingencies and for price increases, whose justification has already been mentioned.

The Table also gives the share of expenditure in foreign currency. This information is always useful, whether the project is financed entirely by the country, or with the assistance of external aid sources. Many countries in fact have serious difficulty in procuring the foreign currency they need, especially in times of economic crisis. Projects that are greedy in terms of hard currency can be difficult to finance when only national resources are available. In such a case, one can envisage alternative options in the design of the project, in order to reduce the foreign currency cost. As for external aid sources, most of these mainly finance the foreign currency costs, leaving the government to cover local currency expenditures.

Project administration. The preparation document devotes a section to the project's management, to its organization and procedures, and to the monitoring and evaluation arrangements. These issues are taken up in Chapter IV.

The preparation document also contains a provisional implementation schedule. Its purpose is to set out the time-frame of planned operations, so as to achieve the project's objectives at least cost and within the shortest period. The schedule takes into consideration the constraints imposed by the project's (national and international) physical, economic and human environment, leaving some margin for inevitable delays. It is often presented in the form of a bar graph (see Table 4), and sometimes as a critical path diagram (PERT), when justified by the project's complexity.

Feasibility of the project. The preparation must demonstrate the project's feasibility in socio-political, administrative, institutional and financial terms (see the first section of this chapter). For this purpose, planners refine the analyses made at the identification stage. They may, for example, bring together representatives of parents, students, teachers and administrators, to make sure that the project is socially and politically acceptable, to work out feasible solutions to administrative problems, or to explore the possibility of extra-budgetary financing.

At the preparation stage, planners can more precisely evaluate the additional operating costs generated by the project once it has been completed. These costs will then be borne entirely by the government, even if external aid covers part of recurrent costs under the project. To calculate them, planners estimate the annual operating expenses of each assisted institution, once fully developed after project implementation, in terms of staff, materials, the maintenance of buildings, furniture and equipment, food and bursaries for pupils, etc. (see Table 5). These costs are calculated on the basis of unit costs observed in the country, possibly corrected in a realistic manner to make them compatible with the project's objectives. On the basis of these estimates, planners calculate additional operating costs generated by the project, and demonstrate, with reference to national financial forecasts, that this additional expenditure can be supported. If not the project should be revised downward.

Table 4. Implementation schedule of the institutional development component of a project*

	Calendar years and quarters																							
	1987				1988				1989				1990				1991				1992				1993			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(a) Administration of education																												
(i) Inspections																												
Construction	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												
Equipment	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x												
Furniture	x	x	x	x	x	x	x	x																				
Vehicles			x	x																								
Local training			x				x																					
(ii) Ministry of Education excluding DEP																												
Furniture					x	x	x	x	x	x																		
Equipment					x	x																						
Local training			x	x																								
Fellowships abroad			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x										
Foreign specialists		x	x	x	x		x																					
Operating costs	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

| | | |

Table 5. Annual governmental operating costs for a new Teacher Training College (fully developed)

Category of expenditure		Cost in thousands of francs (at 1982 prices)
1.	Teaching staff	28 697
2.	Non-teaching staff	23 194
3.	Materials	7 700
4.	Operation of vehicles and other equipment	6 240
5.	Maintenance of buildings and furniture	25 094
6.	Equipment maintenance	6 000
7.	Travel expenses	0
8.	Services (water, electricity, telephone)	0
9.	Sub-total 1 to 8	96 925
10.	Boarding	72 000
11.	Scholarships	0
12.	Total (9 + 11)	168 925
	Total for two Teacher Training Colleges (168 925 x 2)	337 850

Basis of calculations:
1 and 2: Based on detailed estimation of staff required to operate one teacher training college and its annual cost.
3: School supplies: F.3 000 000 plus F.4 700 000 for workshop materials.
4: Fuel consumption: 30 000 km. x 15 litres/100 km. x F.520 + 30 000 km. x 25 litres/100 km. x 520 F. Maintenance and repairs: F.3 900 000.
5: 2 per cent of total building and furniture costs as of the third year.
6: 5 per cent of total equipment costs.
7: No travel planned.
8: Teacher Training Colleges do not pay for water, telephone or electricity.
10: 360 pupils x F.200 000 per school year.

Organization and methods used for preparation

Planners entrusted with a project's preparation have to make numerous proposals in areas falling within the jurisdiction of various departments of the Ministry of Education, and of other governmental bodies of the country concerned. These departments should be involved in the preparation, in order that agreement be reached on these proposals. Their representatives

may, for example, sit on one or several commissions officially created for the project's preparation. The role of these commissions can vary. If their members have good experience in project preparation, they can be given direct responsibility for drafting certain sections of the document. If not, the educational planning department can appoint a preparation team, which draws up a draft document and submits it to the commissions for approval.

It is useful to associate external financing sources in the preparation of the project for which their assistance will be requested. This precaution avoids having later to rewrite the project documents in order to meet the particular requirements of the aid source, a time- and manpower-consuming effort.

Education project preparation methods are similar to those of identification. The preparation of a project requires not only experience with this type of work, but also specialized professional qualifications. It is always better to use national specialists who have a good understanding of the country's milieu, institutions, legislation and social traditions. They are particularly indispensable for field studies. Thus it is in the strong interest of Ministries of Education to constitute teams of well trained experts with experience in these tasks. Ministries can also call upon national universities or firms with competent staff.

Nevertheless, there are cases when the government must use foreign consultants. Experience proves that the most important criterion for their choice is competence for the specific tasks to be executed, and not cost, even though this is generally very high.

Project preparation is expensive and many countries cannot undertake it with their resources alone. Complementary funding can be obtained from some external aid sources. This issue is dealt with in the next chapter, together with financing of projects.

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III. Financing of education projects

The search for funding sources starts right at the beginning of what we have called the project cycle. It is in fact preferable to know from what source financing for the project is to be found before the identification and preparation phases are undertaken. Firstly these processes must take into consideration the particular requirements of the funding source. Secondly, it would be unwise to undertake the preparation of a project, which is both costly and time-consuming, without any serious prospects of financing.

We will first examine national sources of finance, and then external sources.

National financing sources

In most countries, national sources finance almost all educational investment: more than 90 per cent on average in developing countries. Only the poorest countries take massive advantage of external aid, which finances, for example, an average 50 per cent of educational investments in some twenty sub-Saharan African countries.[1]

1. World Bank, *Education in sub-Saharan Africa: policies for readjustment, revitalization and expansion*, Washington, D.C., World Bank, 1988.

National budgets

Generally speaking, education projects are mostly financed by national budgets: the state budget in countries where education management is centralized, regional or local budgets elsewhere.

However, projects take up only a limited share of education budgets. Throughout the world, such budgets are consumed in large part by *committed expenditure*, also referred to as compulsory or fixed. This term refers to operating expenses corresponding to the continuation of the previous year's activities: payment of teachers, other staff and pensioners, operating expenses of existing classes, university departments and administrative offices. Because of predictable increases in salaries and prices, committed expenditure is generally slightly higher than the corresponding expenditure of the previous year.

Other almost obligatory costs are added on to this fixed expenditure:

- additional operating expenditure resulting from recently completed projects;
- funding needs for the annual set of projects under implementation.

Finally, when establishing the annual education budget, the margin available to cover capital and operating expenditures connected with new projects is rather scanty, usually ranging from 3 to 10 per cent.

In theory, budget estimates set out in the plan should take into consideration the above funding needs. But the reality is often different, and annual budgets are rarely in step with the plan; to achieve this, the plan would have to be updated every year on the basis of investments already made, but this is not yet very common. Integrated annual budgets, incorporating the proposals of the plan, are even more rare. And yet such tools would make it possible to better adjust investment programmes to available resources, avoiding drastic reductions in non-salary recurrent expenditure which impair the quality of education.

The share of national budgets available for financing projects has been further reduced recently because of the economic crisis and the resulting dearth of foreign currency, which is

indispensable to pay for imported materials and equipment. This is particularly true of many developing countries, crushed by heavy external debt, slow economic growth, and fast demographic expansion.

The austerity policies set up to deal with this situation often result in giving priority to salaries over development and equipment expenditure in national budgets.[2] Moreover, given the scarcity of available funds, competition among ministries for capital funding from the national budget has intensified. Despite official statements to the contrary, education often has a weak position in this competition: with the aim of stimulating economic growth, financial authorities often favour so-called productive investment to the detriment of social investment.

These difficulties have given a new impetus to the search for alternative sources of financing for education projects.

Other budgetary sources

In most countries, regional and local authorities contribute to the development of education. For example, in 1984, in France, they financed almost two-thirds of public educational investment. The projects they implement may be financed either entirely by them, or, as in France, jointly with the state. In fact, some of the education expenditure by local authorities comes from monies transferred to them by the state expressly for that purpose.

Such decentralization has the noteworthy advantage of providing for better adjustment of projects to the education demand, which local authorities are generally better placed to judge. Also, the latter can more easily consult interested parties in a timely manner.

Some countries have instituted special taxes, whose revenue is assigned to educational activities, especially the implementation of projects. In Mali, for example, the Associations of Pupils' Parents, which have carried out a major part of elementary school construction and equipment since independence, are supported from para-fiscal contributions paid in principle by all taxpayers.

2. K.M. Lewin, *Education in austerity: options for planners*, Paris, UNESCO: IIEP, 1987.

In many countries, the revenue from payroll taxes paid by employers is assigned to technical education and vocational training, and especially to certain investments that can be part of projects.

In France, for example, an 'apprenticeship tax' was instituted to contribute to the development of apprenticeship and technical and vocational education.[3] This is a direct contribution payable by industrial and commercial firms, and calculated on the annual amount of remuneration paid to their staff. In 1987, this tax amounted to 0.5 per cent of total salaries paid in 1986. The French apprenticeship tax has the special feature of being, at the discretion of the enterprise, either payable to the Public Treasury, or allocated to technical education and vocational training expenditure in the enterprise's professional branch. It can either be used for training expenses within the enterprise itself, or paid to public or private institutions chosen by the enterprise with the administration's agreement. This original scheme stimulates enterprises to take greater interest in the training institutions they help to finance. Part of the apprenticeship tax revenue is spent on capital investments, which may be part of projects. In 1984, for example, 47 per cent of furnishing or construction capital expenditure by apprenticeship training centres was funded by this tax.

National Apprenticeship and Vocational Training Services, that exist in several Latin American countries, are also financed from payroll taxes paid by employers. This is the case, for example, of the National Industrial Apprenticeship Service (SENAI) in Brazil. This organization, managed jointly by the state and by employers' associations, was established to provide vocational training to workers, a legal responsibility of private industries. The Service's resources come from the collection of a compulsory contribution by enterprises, based on 1 per cent of total staff salaries. In 1970, 24 per cent of these funds were spent

3. France, Ministry of National Education, *Repères et références statistiques sur les enseignements et la formation*, Paris, 1988.

on capital investment, of which 4 per cent on projects to develop new training centres in disadvantaged regions.[4]

In 1978, Brazil also collected from enterprises another tax earmarked for education, based on 2.5 per cent of salary expenditure. In 1976, this so-called 'salary-education' financed 14 per cent of primary education, probably including some investments. However, it was noted that the collection of several relatively high taxes based on salaries had the disadvantage of discouraging the employment in industry of an over-abundant stock of manpower.[5]

Brazil also instituted a 'Social Development Support Fund', which draws its resources from the Federal Savings Trust, the Bank of Brazil, the Ministry of Education and other sources. This fund extends loans on favourable conditions to public and private institutions for the financing of social projects in conformity with the guidelines and priorities of the plan. Of the total amount of these loans, 60 per cent is devoted to education projects.[6]

There are other forms of education taxation in the world that can contribute to financing projects: taxes levied on lotteries (Brazil), on alcohol (Haiti), etc.

Domestic borrowing is another budgetary resource which a government may use to finance an education programme or project. However, a domestic loan is possible only in a country with a fairly well developed capital market. This solution requires serious preliminary study of the potential market, of the impact of such borrowing on the country's internal debt, of the promotion campaign needed to sensitize the public, etc.

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4. J.C. Veira de Figueireido and R. Guimaraes Boclin, *Le système SENAI, Brésil*, Paris; IIEP, 1975.

5. E.S. Marques and G. Lopez, *La mobilisation des ressources supplémentaires pour assurer l'expansion de l'éducation au Brésil*, Paris, UNESCO (ED/EPP), 1978.

6. Ibid.

Non-budgetary resources

The most important type of non-budgetary resources for the funding of educational investments in developing countries is without doubt the collective effort of local communities. For a long time now, mainly in rural areas and in urban districts populated by recent immigrants from the countryside, people have banded together to construct by themselves the public or private schools needed for the instruction of their children. This community effort is often known as 'self-help'. It is estimated, for example, that more than 50 per cent of existing primary schools in the countries of sub-Saharan Africa were built in this way. In some cases, in order to improve the quality and the durability of the construction, subsidies from the state, from regional bodies or from external aid sources supplemented the effort of local communities, by financing the procurement of construction materials and the hiring of qualified workers, or by providing model blueprints. Special community effort support teams have been constituted in the past, either by national civilian departments, or by associations of volunteers financed by certain external aid sources.

Another part of educational investment, of varying significance depending on the country, is financed through private or community education. However, despite the financial difficulties of governments, the share of private education continues to decline in most countries of the world. Among the exceptions are Pakistan, where the founding of private schools was recently permitted again; Kenya, where the development of community-financed schools (harambee and village polytechnic) has contributed greatly to rapid growth of secondary and vocational education; the Muslim countries of West Africa, where Arab-Islamic education has recently enjoyed conspicuous development, while official education remained stagnant despite rapid population growth. In Mali, for example, Arab-Islamic schools are now recognized by the government, which counts on their support for the development of national education. The construction of buildings for these schools is generally financed by their owners, sometimes with the help of wealthy tradesmen or donors from Arab countries.

From time to time, enterprises and other private donors contribute to the financing of education projects, whether to enlarge existing institutions or to build new schools, in either the public or the private education sector. These contributions can have a purely altruistic objective, or they may have other goals, economic in nature or publicity oriented. It is obvious that such inputs should be sought out, to the extent that they are in line with the general interest, and especially the national education policy, as well as that of the institutions involved. Several countries promote such initiatives by granting tax exemptions for contributions by enterprises or individuals to the development of education. This is true of Brazil, for example.

All in all, national resources for project financing are numerous and varied; they are far from being fully utilized in many countries. Nevertheless, the savings capacities of countries with limited development and their foreign currency reserves are often too small for them to finance all their projects. The difficulty is particularly acute for projects in post-secondary education, technical education and vocational training, as these projects require the procurement of sophisticated and expensive equipment, which the national industry does not produce, and specialized personnel that have to be trained or sometimes recruited abroad. Such projects are often impossible to implement without resorting to external sources of financing.

External financing sources

Various means of financing

Owing to their inadequate resources, many countries approach external sources for the financing of part of their educational investments and to procure the necessary foreign currency. Countries whose economic and financial prospects are good can turn to commercial banks, or, in the case of larger countries, borrow on financial markets under prevailing capital market conditions. Developing countries can also turn to *external aid*, i.e., donations and loans at low interest rates and/or with long reimbursement periods, which are granted by funding sources with

a view to supporting the development of recipient countries. The origin of such aid may be a state (bilateral aid), or an international organization or community of states (multilateral aid), or a private group, foundation or other non-governmental organization (private aid). The normal interest rate loans of the multilateral development banks (the World Bank and the regional development banks) are often included in development aid. In fact, such loans can be granted to countries and for projects that would be ineligible for private bank lending; moreover, their conditions (interest rate and repayment terms) are generally slightly more favourable than those prevailing on the world capital market.

In this section we deal only with aid, generally the only type of external financing accessible to developing countries. Among the various types of external aid, it is obvious that grants are more helpful than loans, since they do not have to be repaid. Low interest loans are more helpful than normal interest loans; in addition, the longer the repayment period, the less the impact of debt service on the borrowing state's budget. This advantage is measured by the *grant element* of loans (see Box 6).

Another decisive feature of the various types of aid is the distinction between tied and non-tied aid. Aid is *tied* when the goods and services supplied must come from the financing country or group of countries. This is true of many bilateral aid sources. Resort to tied aid obviously limits the government's choice as far as the quality and cost of goods and services are concerned, and increases the risk that they may be unsuitable.

Limitations of resort to external aid

Resorting to external aid increases the resources available to governments of under-equipped countries for the implementation of their priority projects. Apart from the direct results expected from such projects, their indirect effects are often considerable: stimulation of business activity and employment, injection of foreign currency, meeting social demand, increasing the government's popularity. Side by side with these advantages, the involvement of external aid sources can result in serious disadvantages:

- increasing the future financial burden;
- the risk of dependence on donors;
- slow action;
- unsuitability for local needs.

Box 6. *The grant element of a loan*

The grant element of a loan is a percentage comparing the loan's reimbursement conditions with those prevailing on private capital markets. It is defined as the percentage difference between the loan's nominal value and the value, discounted in the year of its signature, of payments to be made by the borrower to reimburse his debt.

In principle, the discounting rate applied is the one prevailing on world capital markets at the time of calculation. It goes without saying that the resulting grant element varies with prevailing open market interest rates.

The OECD uses a fixed discounting rate of 10 per cent for the calculation of grant elements of loans included in development aid. Under these circumstances, a typical IDA (World Bank subsidiary) credit, which is interest-free, bearing a 0.75 per cent annual commission, and with reimbursement over fifty years with a grace period of ten years, includes a grant element of 86 per cent.

Source: IDA in Retrospect, World Bank, 1982.

Financial costs. Financial costs are obviously greater for loans, which increase the state's external debt, especially for hard loans. But even grants can be Trojan horses, if they generate excessive future expenditure for the national budget.

Many external aid sources finance mostly foreign currency investment; counterpart investment expenditure in local currency, and operating expenses, must then be covered by the government. Ministries of Education and Finance are responsible for keeping such commitments within reasonable limits. They may well be quite right in rejecting a project to be financed by external aid because of the future burden on the national budget.

The risk of dependence. Resorting to external aid sources can generate a risk of greater dependence, putting in danger the sovereignty of the country concerned, especially in the field of education policy. Aid sources in fact pursue objectives that do not necessarily coincide with those of the recipient governments.

Bilateral aid is not prompted solely by humanitarian considerations, and also has, quite naturally, national motivations: increasing the political and economic influence of donor states, developing their trade, etc. Multilateral and international institutions, whose aid is almost exclusively aimed at the development of member countries, can shelter them from excessive influence of bilateral aid. But both may use their assistance to influence the policies of the beneficiaries where this is considered to be in the interests of those countries.[7]

In practice, the risk of dependence is most serious when external aid finances a significant proportion of a country's investment. Efforts by donors to extend their dialogue with the government into the development policy area, while ensuring a better link between national policy and projects, increase this risk of dependence. In extreme cases, national planning sets aside its prerogatives, and is reduced to preparing documentation for external aid.[8] Dependence is even stronger in countries which, being short of competent officials, have to call on foreign specialists for the identification and preparation of their own projects.

The multiplicity of external aid sources can aggravate these problems, and even generate situations which are the opposite of those desired, such as internal contradictions in the development effort, or overlapping projects. An avalanche of documentation and study missions, when the personnel able to deal with them are in short supply, tends to increase the confusion.

7. M. Gillis, D.H. Perkins, M. Roemer and D.R. Snodgrass, *Economics of development*, New York, Norton, 1983.

8. A. Damiba, op. cit.

Thus it is of capital importance for governments to preserve their ability to co-ordinate external aid, while ensuring its consistency with national development objectives. Such co-ordination is more difficult in poor countries, because of their acute needs. Co-ordination among aid sources themselves, which could have advantages, would further undermine the sovereignty of states.

Slowness. When reacting to dramatic situations such as destruction caused by war, natural disasters or flows of refugees, external aid sources can act fast. Under normal circumstances, on the other hand, most donors follow a rather long project cycle, as described earlier. In the case of the World Bank, for example, at least two years elapse between project initiation and signature of the loan agreement. As we have seen in connection with project appraisal, such cautiousness is justified by the need to make sure that applications for financing are well founded. But it involves serious disadvantages for the applicant countries: at the end of such a long period, it may turn out that the aid finally accorded has partly lost its justification.

Moreover, some bilateral aid programmes have to be approved every year by the parliamentary body of the donor country, with a risk of discontinuity.

Only a few organizations with decentralized management, such as Unicef and some NGOs, can act with speed and flexibility. Their example should be followed, although a minimum period necessary for project appraisal must be preserved.

The risk of unsuitability. External aid sometimes turns out to be unsuitable for the recipient country. This applies to certain projects accepted by governments under donor pressure, in order to meet a national need for fresh money. We have already looked at such examples.

Sometimes this is also the case when aid is tied. Sophisticated construction and equipment designed for developed countries can lead to unaffordable maintenance and replacement

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costs. Technical assistants are sometimes poorly prepared to serve in the recipient country and not receptive enough to the realities of the local situation.[9] Training programmes abroad that are financed by tied aid can be inappropriate for the country's needs, in terms both of the quality and type of training, and of the language of instruction.

Comparative advantages of external aid. External aid cannot meet all needs. It enjoys comparative advantages over national sources in its provision of foreign currency, technical assistance and scholarships for studies abroad. It quite naturally seeks to highlight the quality of these contributions. Thus, aid services prefer to finance projects requiring advanced technology, concentrated in one location and easily accessible, and their favourite areas are post-secondary, technical, and vocational education.[10]

On the other hand, external aid is often poorly placed to finance the development of primary education -- except for teacher training -- and of non-formal education. Its involvement in these areas risks leading to construction standards and costs that are too high to be generalizable, and to demotivation of the community effort.

Nevertheless, despite the risks involved in appealing to external aid sources, they often turn out to be indispensable for poorly developed countries for the implementation of certain types of educational projects: for example, establishment of high-level university institutions, introduction of innovations, improvement of management. Proof of the usefulness of such sources is the negative experience of those less developed countries that tried to develop their education system all on their own.

In any case, recipient governments have to co-ordinate and control external aid contributions. One of the aspects of such control is a proper dialogue with donors regarding education

9. F. Lethem and L. Cooper, op. cit.

10. World Bank, *Education in sub-Saharan Africa...*, op. cit.

policies and objectives. Another important aspect concerns decision-making on projects, and especially taking responsibility for the identification, preparation and evaluation process.

Main sources of aid for education

In round figures, it is estimated that in 1981-1983, bilateral sources provided 70 per cent of world education aid, multilateral sources 23 per cent, and private sources 7 per cent. For more details on their contributions, the reader is referred to Table 6.

The content of aid and the way of providing it vary from donor to donor.

With a few exceptions, bilateral aid consists either of grants or of low-interest loans; the average grant element is about 90 per cent, but much bilateral aid is tied. Most NGO aid takes the form of grants. As for multilateral aid, some is donated (UNDP, Unicef, WFP, European Development Fund), and some is lent with a varying grant element (development banks and funds). The World Bank and the regional development banks also extend loans on world capital market terms. Their aid, and that of other international organizations is not tied.

The contributions of most bilateral aid sources to education consist mainly of technical assistance and scholarships, there being a few exceptions, like for example, Swedish aid; very little bilateral aid is given for investments, except for a certain amount of equipment. The same holds true of the UNDP and of UNESCO.

On the other hand, multilateral banks and funds, such as the World Bank and the regional development banks, mostly finance investments, albeit not exclusively. In the past, loans from multilateral banks covered mainly expenditure in foreign currency; at present they also finance some local currency expenditure, especially for the poorest countries.

Some donors, such as Unicef, a few bilateral aid sources and some NGOs, make particularly significant contributions to the functioning of education (equipment, supplies, salary supplements). These contributions, often neglected by other aid

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Table 6. Main sources of education aid in the world

Organizations	Annual education financing (1981-86 average) ($ US millions)	Type of financing	Main contribution
Bilateral aid			
OPEC member countries	70 [1]	Grants	?
CMEA countries	200 [1]	Grants (loans)	?
OECD countries	2 716	Grants (loans)	Technical assistance, scholarships
Multilateral banks and funds	1 102		
World Bank	710	Loans	Capital
(of which IDA)	257	Interest-free loans	Capital
African Development Bank	74	Loans	Capital
Asian Development Bank	91	Loans	Capital
Inter-American Development Bank	135	Loans	Capital
European Development Fund	43	Grants	Capital
Islamic Development Bank	21	Loans	Capital
OPEC Fund	11	Loans	Capital
Other multilateral organizations			
UNDP	21	Grants	Technical assistance
Unicef	33	Grants	Equipment, operating costs
World Food Programme	110	Grants	Food
Unesco Ordinary Programme	37	Grants	Technical assistance
Unesco Extra-Budgetary Resources [2]	52	Grants or loans	Technical assistance

[1] Estimation for 1982 (J. Naumann).
[2] Originating in large part from above organizations.
Source: Unesco, *Trends in external financing of education: 1986 Report*, Paris, 1988. (ED/EFD).

sources, are essential for maintaining a certain quality of education in the poorest countries. The World Food Programme provides only food, in particular for school feeding programmes.

Thus there is at least a potential complementarity in the contributions of bilateral and multilateral aid sources, and it is in the interest of governments to take advantage of it. It is generally rather easy for less developed countries to obtain technical assistance and scholarships. On the other hand, in a time of financial crisis, the main problems are the shortage of investment capital and the lack of funds for materials and school supplies. In this respect, multilateral aid sources play a crucial role in the financing of education projects. The remainder of this chapter reviews multilateral education aid programmes, and especially those connected with the United Nations. We examine first the programmes of development banks and funds, then those of other international institutions.

Multilateral banks and funds. Under this general title, we group various institutions whose specific mandate is the funding of investments for development:

- The World Bank or International Bank for Reconstruction and Development (IBRD), established in 1946,
- The regional development banks, created in the sixties;
- The European Development Fund (EDF), established in 1957;
- The multilateral Arab group, comprised of several development banks and funds set up in the seventies.

The World Bank or International Bank for Reconstruction and Development (IBRD). Among these various organizations, the World Bank finances the largest programme of loans for education. As its name indicates, it is a bank, and it extends loans to its member states for specific development projects, as defined earlier. For several years now, these loans have often been aimed at supporting the implementation of a development policy by the borrowing state. For this purpose, the World Bank has also initiated loans with broader objectives:

- Sectoral loans, which finance a significant share of a sector's investment programme;

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- Structural adjustment loans, which support an overall economic reform programme in a country, with a view to facilitating a return to growth in the context of an unfavourable balance of payments;
- Sectoral adjustment loans, aimed at reforming and restructuring a sector in difficulty.

World Bank loans come in two types: the IBRD loans, extended at interest rates close to those of the world financial market; and the credits of the International Development Association (IDA), which are long-term interest-free loans. IDA credits, reserved for the poorest countries, make up about one-third of the total volume of World Bank lending (see Box 7).

These loans and credits are always relatively large, ranging from one to several hundred million dollars, depending on the size of the recipient country. The World Bank often seeks association with other donors for the financing of large projects (co-financing).

Box 7. *Terms of World Bank loans*

IBRD loans, which are the majority, are financed through World Bank borrowing on world financial markets. Because of rigourous management, the World Bank can often borrow on favourable terms, allowing it to extend loans with conditions slightly more advantageous than those of the market. In 1986, these loans bore variable interest rates, of the order of 8.5 per cent, with a repayment period of fifteen to twenty years and a grace period of three to five years.

IDA credits are financed from a fund to which rich countries make donations from time to time. These are interest-free loans, but bear an annual service commission of 0.75 per cent, with a repayment period of fifty years including a grace period of ten years. Some states having reduced their contributions to the fund, only the poorest countries can now obtain IDA credits.

Education loans and credits constitute only an annual 4 to 5 per cent of the total amount of World Bank lending. The great majority of these loans still finance specific projects, but these are now often focused on policy reform; they are then subject to conditions regarding the borrowing state's education development policy. In addition to loans for education as such, the World Bank finances education or training components included in non-education projects. For example, a rural development project might provide for the construction of primary schools, or the organization of training courses.

The World Bank has developed rigourous methods for economic and sectoral diagnosis of its member states, and for appraisal, management and evaluation of projects, in co-operation with other United Nations organizations -- in particular UNESCO as regards education. In its review of proposed projects, the World Bank does not limit itself to studying their intrinsic merits. Within a global and intersectoral approach, each project is considered in the overall context of the country's economic and social development. The other development banks and funds have adopted similar methods.

Given the rigour of its methods, the World Bank is deliberately perfectionist, which can hamper its speed of action, but contributes to ensuring the quality of such action. The time from project initiation to signature of the loan agreement is relatively long, often two years or more. The World Bank extends repayable advances on loans for financing of project preparation.

From 1964 to 1989, the World Bank and UNESCO operated a co-operative programme, aimed at assisting member states of both organizations with the identification and preparation of their education projects. This programme, which has now come to an end, contributed to the identification and/or preparation of more than two-thirds of education projects financed by the World Bank between 1964 and 1980, and also, as we have seen, to broadening the World Bank's lending programme.

In theory, the preparation and implementation phases of projects financed by the World Bank are the responsibility of borrowing states, with appraisal reserved for the Bank. In actual practice, the Bank is involved on a permanent basis throughout the

project cycle, in particular through supervisory missions which regularly monitor implementation by national project units. In addition, projects are often evaluated in the course of execution, and each of them is subjected to a retrospective evaluation, which is discussed at greater length in Chapter IV.

The regional development banks. The regional development banks were founded by regional organizations of states to finance public investment aimed at development of their members. They are

- The Inter-American Development Bank (IDB);
- The Asian Development Bank (AsDB);
- The African Development Bank (ADB);
- The Caribbean Development Bank (CDB).

Their resources and terms of lending are similar to those of the World Bank. Like the latter, the regional banks have established funds, made up of donations by developed states, that extend loans at zero or very low interest rates. The repayment conditions of other loans are close to those of the open market, with the exception of certain soft loans granted by the IDB. As at the World Bank, the proportion of loans for education is of the order of 5 per cent of total available financing.

In their project appraisal, the regional development banks are often more flexible than the World Bank about the borrowing state's development policies. Their working methods and their procedures are similar to those of the World Bank, but often less thorough. The ADB and the IDB have signed co-operative agreements with UNESCO, aimed at assisting their member states with project preparation. The regional banks are increasingly paying attention to retrospective evaluation, with a view to improving the quality of their future projects.

The African Development Bank is financing several education projects jointly with the World Bank. Their present priorities in the education field are in fact similar.

The multilateral Arab group. The organizations constituting this group have activities and methods similar to those of the regional development banks. Created by various groups of Arab, Muslim or oil-producing states, their services are provided more broadly to

developing countries, whether or not they be Muslim. The most active in the field of education are the Islamic Development Bank and the OPEC Fund for International Development.

The European Development Fund.[11] This fund was established by the states of the European Economic Community for co-operation with associated countries of Africa, the Caribbean and the Pacific. Its funds are provided by the Community. Its aid programme is established every five years by an agreement concluded among the states involved (Lomé Conventions). Three-quarters of the amount of the fund is devoted to financing development projects. This financing is 90 per cent in the form of grants, and 93 per cent of it is allocated to African countries.

Education projects represent about 6 per cent of all EDF-financed projects. They mainly cover capital expenditure and scholarships. Since 1981, co-operation among institutions of assisted countries and European countries has been one of the favoured means of implementing these projects.

Project elaboration and evaluation methods are close to those used by the World Bank. However, the EDF also finances two small programmes having decentralized management: micro-projects decided on the initiative of local communities, and a programme of small projects co-financed with NGOs. Micro-projects include construction of primary schools.

The other United Nations institutions. Even though most United Nations programmes and funds finance training activities, only four of them devote substantial amounts to the development of education:

- The United Nations Programme for Development (UNDP);
- The United Nations Children's Fund (Unicef);
- The World Food Programme (WFP);
- The United Nations Educational, Scientific and Cultural Organization (UNESCO).

The UNDP. The United Nations Programme for Development, established in 1958, grants funds for technical co-operation development projects. It is supported by voluntary contributions from rich countries.

11. Commission of the European Communities, *Dix ans de Lomé*, 1986.

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The amount of UNDP assistance is fixed for a five-year period, and distributed among recipient countries as a function of their population and level of development. Each of them is attributed an indicative planning figure (IPF), which constitutes the financial framework of aid. Within this framework, projects meeting the priority needs of national development are formulated and prepared jointly by the government and the Resident Representative, with the possible assistance of specialists, and then appraised by UNDP headquarters. Despite the difference in procedures, the project cycle and the criteria used for appraisal are similar to those of the World Bank. A Project Development Fund was created by the UNDP to assist member states with project identification and formulation.

The projects are executed by specialized agencies of the United Nations (UNESCO for education). These can be either development operations, or pre-investment studies. Technical co-operation among developing countries (TCDC) and co-operation with NGOs are two favoured means of UNDP project implementation. Monitoring and evaluation of projects are carried out by tri-partite missions (government, UNDP, executing agency). At UNDP headquarters, the project retrospective evaluation effort was recently strengthened with a view to improving future programmes.

Education's share of the UNDP programme has been in constant decline since the seventies, amounting to 3.4 per cent in 1987. Projects pay mainly for technical assistance (more than 50 per cent of the total amount on average), equipment and scholarships.

The UNDP also organizes round-tables of donors, in order to help a number of countries -- especially in Africa -- to find external financing for their priority projects. In addition, it manages a series of small international funds made up of voluntary contributions by states: among others, the United Nations Capital Development Fund, the United Nations Office for the Sahel, the United Nations Volunteers. Their contributions to the development of education are minimal.

UNICEF. Founded in 1946 to assist disadvantaged children, Unicef provides Third World countries with aid in the form of grants. This aid is primarily directed towards public health, drinking water supply, nutrition, emergency assistance and basic education. Unicef, like other international organizations, draws its resources not only from contributions by governments of rich countries but also from private sources (35 per cent of total resources).

The broad outlines of Unicef programmes in assisted countries are fixed for a period of four or five years. Their approval, implementation and monitoring are largely delegated to Unicef representatives at the national level, in co-operation with beneficiary governments. The decentralization and simplicity of Unicef procedures provide for flexibility and speed of action. Preparation and evaluation of Unicef projects are also decentralized, involving UNESCO Regional Offices under the co-operative programme between the two organizations, as well as national experts. Continuous evaluation is an integral part of Unicef projects.

Programmes financed by Unicef are based on a global view of children's needs. Their targets are the most disadvantaged children, namely those from rural environments and slums, out-of-school youth, women and girls. Education projects absorb 13 per cent of total Unicef funding, mainly for primary and non-formal education. They primarily finance the purchase of supplies and small equipment, as well as participation in certain operating costs, in particular in-service training of teachers, i.e., essential inputs for the quality of education.

The WFP. Created in 1961 by the UN and FAO to deal with food crises, the World Food Programme provides aid in kind to developing countries either on an emergency basis, or for nutritional improvement or development projects. The WFP's resources consist of voluntary donations by member countries, in particular those with food surpluses.

Education projects absorb approximately 21 per cent of WFP aid through:

- Food assistance for primary schools (school feeding programmes);

- Food assistance for other types of educational programmes (secondary schools, literacy programmes, etc.);
- Construction of schools through self-help, (food for work programmes).

In each country, WFP-assisted projects are incorporated in an operational plan with a renewable duration of three years. They are implemented by recipient countries themselves. Appraisal, monitoring and evaluation of projects are carried out by joint WFP-UNESCO missions, in co-operation with national authorities.

With the exception of emergency assistance, food aid does involve a number of risks for beneficiary countries, despite its altruistic aims. Past distribution of large quantities of food surpluses from rich countries has sometimes had harmful consequences: negative impact on the income of farmers, because of the resulting decline in food prices;[12] changes in eating habits leading to higher imports; difficulty for the assisted states to continue food distribution after the interruption of aid, for example, in school feeding programmes. In order to protect against these risks, WFP appraisal missions systematically evaluate the economic aspects of projects, and reformulate them if necessary.

UNESCO. UNESCO's regular budget for the education sector is essentially devoted to international co-operation in this field: conclusion of international agreements of a standard-setting nature, organization of regional meetings allowing member states to share their experience and jointly define guidelines for their education policies, assistance with the formulation and execution of these policies, dissemination of innovations, etc. Nevertheless, part of this ordinary programme is also devoted to financing small projects, generally of an innovative nature, jointly with member states. Through its regional offices UNESCO has educational innovation networks for the implementation of such projects and the dissemination of their results.

12. T.W. Schultz, *Investing in people*, University of California Press, 1981.

But it is above all through its extra-budgetary resources that UNESCO is able to finance education projects. UNDP education projects are executed by UNESCO, and several other United Nations organizations (multilateral banks, Unicef, WFP) call on its technical expertise to help member states with project identification, preparation or evaluation. In addition, several states and non-governmental organizations have assigned *funds in trust* to UNESCO for the financing of priority education projects. UNESCO is also in a position to facilitate the search by member states for financing from various other potential sources.

The above overview of external aid sources shows that most of them use the methods of project identification, preparation, appraisal and evaluation. Planners in aid-receiving countries must know these methods, not only to make their projects as effective as possible, but also to be able to negotiate funding with donors with the best chances for success.

Negotiating education projects

We close this chapter with a discussion on the negotiation of education projects. This process confronts representatives of the Ministry of Education (the spenders) and those of the funding body (the financiers), be it the Ministry of Finance, of Planning, or an external aid source. In the course of negotiations, the latest version of the project (for example, the appraisal report) is examined in detail. The two sides may propose modifications that are discussed, and possibly adopted by common agreement. The negotiations normally result in project approval, and, in the case of external funding, in the signature of a co-operation or loan agreement.

Diplomats and other professional negotiators know that the factors with the greatest influence on the outcome of negotiations are *power* and *information*.

In the negotiation of an education project, most of the power would seem a priori to be in the hands of financiers, because they have the resources that are most difficult to come by. A Finance Ministry has additional power by virtue of its leading role in the country's development policy.

But educators also hold trump cards. After all, education is an important sector of national life, and a large consumer of public monies. Public opinion and politically powerful pressure groups, teachers in particular, are deeply attached to education. Thus the Ministry of Education often has a strong position. Finally, those responsible for the national economy and external aid sources are well aware that the country's future depends in large part on its human resources.

In the negotiation of projects financed by external aid, negotiators representing recipient countries also have power that they are not always aware of. The donor in fact has a grant or lending programme to be executed. When the project negotiation starts, he has already invested a lot of effort in its study and appraisal. He would need very compelling reasons to reject the financing. We might add that the aid organization's staff has a professional interest in seeing the project through to completion. Therefore a basis of understanding can generally be found between their requirements, which flow largely from the criteria examined in Chapter II, and those of the beneficiary country.

In any negotiations, the power of one side or the other can be reinforced, or 'legitimated' as it is sometimes put, by a written document, especially if it is well drafted and well presented. It may be the Finance Ministry's draft budget, the project preparation or appraisal report, or a feasibility study. The World Bank's appraisal reports, for example, which present 'fully packaged' projects, legitimize its power at the negotiating table.

Thus it can be an advantage for the Ministry of Education to have drafted the reference document. If this is not the case, there is no reason for negotiators to let themselves be impressed by the document submitted to them, as it is only a basis for departure. Nothing prevents them from making counter-proposals, preferably in writing.

The above considerations show that representatives of the Ministry of Education have means to get their point of view across. However, to be convincing, their arguments must:

- consider the objectives pursued by the other party: Ministry of Finance or external aid source;
- be based on a coherent analysis of reality, both quantitative and qualitative, preferably relying on objective data.

Thus the arguments put forward by each partner at the negotiating table are a function of available information on: the project and the problems to which it responds; the country's economic and financial context; the general objectives pursued by the other party; the goals it expects to reach, and the margin of manoeuvre it has in the negotiation.

Preparing for negotiations

In order to negotiate a project with the best chance of success, the most important point is serious advance preparation. Unfortunately, this is not always possible, because of the haste involved in certain negotiations. In such a case, it is often better to put off the date, rather than to participate on an improvised basis. Four points are essential for good negotiation preparation:

- Knowing the project well;
- Knowing the goals to be achieved and the admissible margin of flexibility;
- Knowing the other partner;
- Exploring possible areas of agreement.

The first point is obvious, but it is not superfluous to stress it. Only with in-depth knowledge of the documentation (identification, preparation and appraisal reports, feasibility studies, etc.) can one grasp the context of the other side's proposals, possibly object to its arguments, and draw up solid counter-proposals.

In the second place, negotiators must know the objectives they are to achieve. These objectives are usually set out in terms of reference from the Ministry of Education, which are established after examination of the most recent proposals on the project. However, negotiators need some leeway in order to reach compromises. Experienced negotiators start by asking for more

than they hope to obtain; this tried tactic increases the chances of success, provided one does not exaggerate to the point of reaching an impasse.

In order to overcome possible points of disagreement, it is useful, before the negotiations, to explore a broad range of envisaged options: on the one hand, those that might be proposed by the negotiators, and on the other, those that could be put forward by the partner. It is advisable to study in advance the medium-term consequences of these options, for example, for the national budget, for the operations of new institutions, for the work-load of teachers, etc.

Experienced negotiators strive to develop in advance the arguments supporting their proposals. It is generally better to restrict oneself to a small number of clear, solid arguments, if possible based on figures.

In the third place, negotiators should obtain as much information as possible about their future partners' point of view, motivation and pursued objectives.

One of the partners is always the Ministry of Finance or the Planning Ministry, even in the event that the project is to be financed by an external aid source. Its role, as stressed by T. Malan,[13] is to adopt a global view of development, and to safeguard overall consistency of governmental objectives vis-à-vis each sector. The Finance Ministry wants to limit budgetary growth, especially in a period of financial difficulty. It generally puts on the brakes when confronted with proposals to increase expenditure. It underscores the funding needs of other sectors, and looks for savings possibilities. The book by T. Malan contains a detailed study of the context of negotiations with Ministries of Finance and of Planning.

External aid sources, as we have seen, pursue their own objectives through assistance programmes. These objectives may include altruism, the desire to accelerate the recipient country's economic development, and that of increasing the donor's own influence. It is important for project negotiators to have a good understanding of the motivation of the aid source concerned; some

13. T. Malan, op. cit.

of them have been outlined in the preceding section. Negotiators can get a fairly precise idea by consulting the publications of aid organizations. The World Bank and some regional development banks, for example, periodically publish papers on their policy in the field of education; these make recommended reading for negotiators. Meetings with resident representatives of donors are also useful.

Finally, well advised negotiators try to foresee areas of disagreement and possible grounds for understanding, in order to achieve a result acceptable to both sides. When properly conducted, negotiation can in fact be a positive-sum game, ending not in victory for one side and defeat for the other, but in a compromise whereby each side wins on a certain number of points.

To achieve this, adept negotiators try to identify individuals in the other camp, who might be influenced more easily by their arguments, and with whom it might be possible to form alliances on certain issues. They also try to win allies among the senior officials of the aid organization.

Once the goals have been set, the information collected and the tactics elaborated, it may be useful to hold a sort of rehearsal or simulation of the negotiations, if only to test the value of arguments put forward.

Negotiation techniques

Negotiation techniques have been studied by many researchers and practitioners, for example, diplomats, specialists in group dynamics and sales experts.

We have already dealt with the most important point, namely the need to prepare carefully. For the rest we limit ourselves to a few notes on the behaviour of experienced negotiators:

- They seek to maintain a certain amount of pressure on the other side;
- However, they always strive to understand their partners and to respect their point of view;
- They seek out possibilities for currencies of exchange towards an acceptable compromise.

As said, it is always preferable to start negotiations by asking for more than one hopes to obtain, but without going too far. Adept negotiators try to maintain their demands as long as possible, accepting concessions only on secondary points, preferably when they are accompanied by concessions from the opposite side. The negotiator who unconditionally agrees to significant concessions has quite obviously not much chance of achieving his objectives.

This is why frequently agreement is not reached on important points until the end of negotiations. If negotiations are held abroad, it is better for the negotiator not to be in a hurry, and to be ready to postpone his date of departure! Otherwise he may find himself forced to make important concessions at the last minute.

While defending his own position, the adept negotiator strives to understand and to respect his counterparts. His goal is to preserve a favourable atmosphere between the parties, not only for the purpose of reaching a final agreement, but also for the more distant future, if only with project execution in mind. Therefore he avoids attacks, provocations, judgements and interpretations of the opposite side's position, while honestly and courteously maintaining his own point of view.

The adept negotiator rarely responds to a proposal with an immediate counter-proposal, for this could be interpreted as a negative response. When he must express his disagreement, he does so with moderation, first advancing his reasons. If the point in question risks leading to a conflict, he prefers to suggest that its discussion be put off, since in any event the important decisions are almost always taken towards the end.

Finally, in order to find some grounds of understanding, it is important to look for bartering points to satisfy the other side, and to facilitate mutual concessions. To do this, the skillful negotiator continuously probes the other party's motivations by questions and comments harking back to its position. He seeks to present himself as a trustworthy partner. Finally, he tries to avoid having decisions taken that would result in negative consequences for the other side.

Once the negotiations are over, the project is assured of receiving financing. This sets the stage for implementation, the most difficult part of the cycle. As we shall see in the next chapter, project management is a complex process. We will put particular stress on the need for an attentive monitoring and evaluation effort, so as not to lose sight of what is essential, namely the project's objectives.

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IV. Management and evaluation of education projects

The implementation of an education project is generally the longest stage of the cycle, during which schools are built or repaired, their equipment installed, teachers trained, innovations introduced, and service, research or administrative institutions established or reformed. At the end of this stage, the new entities should be able to function on their own, without additional investment. We distinguish between two types of complementary activities in this stage, management on the one hand, and monitoring and evaluation on the other.

Management is the crucial function of project implementation. It consists in co-ordinating the application of means with a view to achieving established objectives. Project implementation is accompanied by monitoring and evaluation activities, which provide information about actual results. They are of capital importance for the success of the project, and for that of future projects with similar objectives.

Management of an education project

It is said that to manage is to have certain tasks carried out by others, in order to achieve a common goal. More precisely, project management consists in co-ordinating the activities of

different departments, groups and individuals who contribute to its execution, in such a way as to achieve the established objectives. A project manager co-ordinates the execution of tasks that he does not carry out himself, but for which he is responsible.

A large part of identification and preparation work aims at minimizing project management problems. In this respect, let us recall some of the essential points taken up in Chapter II. Project management is all the easier if:

- The project is simple and well suited to the management capacities of national staff;
- Its objectives are clearly set out;
- It is consistent with the national education policy, and enjoys the Minister's full support;
- Its financial burden can easily be supported by the national budget;
- All its aspects have been prepared in detail.

But the world being what it is, it is rare for a project to conform precisely to expectations, even if it does not involve any technical uncertainty -- for example, if it deals only with the construction of school buildings. The national and the world environment changes, as do governments and ministers, budget allocations sometimes arrive late, firms go bankrupt, work does not always start on time, a strike may disrupt equipment delivery, etc. Such deviations are obviously even more frequent when the project aims to improve the quality of education, to introduce innovations, or to enhance the efficiency of administration, since it depends even more on human environment. Hence it is useful for the manager to obtain periodic information about the project's progress and results.

It would be unthinkable to take up all the aspects of education project management here. The reader is invited to refer to the abundant literature on the management of firms and administrations. We only mention a number of points whose importance has been demonstrated by experience.

Organization

One of the most serious problems of developing countries is their shortage of management staff. While ensuring good control of projects, national officials must look for a type of organization that yields optimal utilization of existing human resources.

In practice, an education project can be managed by the state itself, by another public body, or by the external aid source financing it. The last solution is used frequently by bilateral aid sources.

Projects financed by a World Bank loan or credit are managed by the recipient government. The management can be entrusted to the division interested in the project, when that division has the necessary staff and organization. For example, the division of primary education, when the project aims to develop such education. This division then benefits from the management efforts provided for in the project (staff training, office equipment, etc.).

If the project is of interest to several divisions or ministries, various solutions can be adopted:

- Management of each component by the beneficiary division, a rare solution as it is expensive and causes difficulties of liaison with the donor;
- Management by one of the divisions concerned, which requires at times delicate arrangements as to co-ordination among the divisions;
- Management by a project implementation unit distinct from the beneficiary divisions, within the Ministry of Education or another ministry (for example, public works or finance), and whose existence tends to be perpetuated from one project to the next.

Project implementation units associated with the World Bank generally function well, acquiring great management experience over the years, which can be put to advantage for subsequent projects. However, when a project is managed by such a unit, the project's beneficiary divisions hardly profit at all in terms of management experience. Moreover, such units have on occasion become privileged enclaves within the national civil service, which can cause serious problems.

The management team of an education project financed by the World Bank generally includes the following staff:

- The director;
- An architect;
- A procurement officer;
- An accountant.

These officers are assisted by support staff in varying number. If the management is entrusted to a separate project unit, an educator may be included on a full-time basis, to ensure supervision of studies, technical assistance, training, educational evaluation, etc.

Management tasks

The management of an education project involves numerous and varied tasks. For example, a World Bank document[1] enumerates 19 main tasks assigned to project implementation units (see Box 8). And this includes only those that directly concern project implementation. Other activities, in particular liaison with interested ministries and divisions, are additional. Liaison with the Ministry of Education requires special attention, since its support is essential for the project's success.

As already said, co-ordination is a major role of any manager. An education project unit has, at any time, simultaneously to execute or have executed a certain number of tasks, as shown in Box 8. Its staff must plan and supervise the execution of each of these tasks so that:

- The work is completed on time;
- The quality of the work conforms to the established objectives;
- Its cost in money and in time is acceptable.

The director co-ordinates the work of his team's members to this effect. But he also ensures co-ordination among the various ministries, organizations, enterprises, etc., involved in the project.

In order to facilitate co-ordination among the various tasks and their executors, the project director first prepares, in consultation with other departments concerned, an operational

1. World Bank, *Education project implementation guide*, Washington, D.C., 1975.

Box 8. *Principal tasks for the management of an education project*

The main tasks assigned to a World Bank financed education project implementation unit are as follows:

(a) ensuring liaison with the World Bank;
(b) developing a realistic operational plan;
(c) choosing, informing and recruiting technical assistance staff;
(d) co-ordinating and supervising the services of such staff;
(e) organizing, co-ordinating and controlling the training and scholarship programme;
(f) choosing, acquiring and surveying land for construction;
(g) choosing and hiring the architects to whom the design of buildings will be entrusted;
(h) guiding and supervising these architects; examining their drawings, the draft calls for tender and draft contracts;
(i) distributing all useful information to specialists and consultants;
(j) entrusting the preparation of equipment lists to the education departments concerned; preparing calls for tender and contracts;
(k) preparing furniture lists, calls for tender and contracts;
(l) supervising the awarding of construction contracts;
(m) supervising the awarding of equipment and furniture contracts;
(n) supervising works, procurement operations, reception and installation of equipment and furniture;
(o) developing the accounting system;
(p) ensuring the payment of contractors, suppliers, specialists, scholarship holders, etc.
(q) keeping documentation, communicating information and preparing periodic reports;
(r) supervising implementation of the project as a whole;
(s) ensuring the startup of new installations.

Source: Education Project Implementation Guide, World Bank/IDA, 1975.

plan, i.e., a temporal framework that serves as a common reference for all. This plan may be supplemented, for some items of the project, by activity timetables or network diagrams (PERT). When drawing up the operational plan, the manager must be realistic, that is, consider the probable constraints and local customs in his estimation of execution times. It is not always easy

for him to do so, for he must also try to satisfy his superiors, who want to see the project progress rapidly. The plan has to be revised from time to time, to take account of the project's status as revealed by monitoring.

Co-ordination is an arduous and extremely consuming task. It can run up against difficulties of communication (whether it be transport, the telephone or inter-personal relations), administrative sensitivities, lack of motivation of underpaid civil servants, etc. Experience, a methodical approach, a sense of human relations and dynamism are among the main qualities needed to overcome these difficulties.

Rigour is another key quality of the ideal project manager, especially financial rigour. A familiarity with figures, and even a taste for their manipulation are required. Rigour also means meeting deadlines for bid awards, submission of reports, etc., all of which are essential for successful completion of a project.

Last, but certainly not least, the project director must know how to motivate his staff, so as to maintain their morale and productivity at a high level.

Some common problems[2]

The problem most commonly encountered in education project management is that of execution delays. Such delays are frequent at the beginning of projects: in the nomination of national staff and the recruitment of technical assistants; in the disbursement of funds by the government or donor; in the publication of decrees or regulations needed for project implementation. These initial delays are often due to the slowness of bureaucracies, be it that of the government or of the donor.

Once the start-up phase is over, project execution generally poses fewer problems. Execution delays can then result from a shortage of budget allocations or foreign currency, which sometimes forces work to stop. But those resulting from inefficient project management are more frequent: delays in the acquisition of land, in the preparation of architectural plans and

2. W.C. Baum and S.M. Tolbert, op. cit.

equipment lists, in the bid awards and signature of contracts; insufficient supervision of work; passivity in the face of events damaging to the project; low staff productivity.

Whatever the reasons, execution delays have serious consequences for the project: they contribute in particular to increasing its cost, especially in a period of inflation, sometimes forcing decision-makers to reduce or eliminate some of its components.

Changes in the composition of projects are in fact quite frequent. The World Bank estimates that two-thirds of the projects it has assisted were modified in the course of implementation, either because of delays, or because of government policy changes.

Thus the competence of the manager is an important factor in good project implementation. The dearth of good managers justifies the efforts made to train them, either through specialized in-service courses for project managers, or through the creation of management institutes. But training, however good it may be, cannot replace experience. One really learns to manage only by doing it.

Management of technical assistance

With the exception of the services of architects or engineers contributing to civil engineering works, the management of technical assistance differs greatly from that of physical investments. Specialists do not in fact agree on appropriate methods for the implementation of technical assistance. To be effective, behavioural changes are often necessary. Not a great deal of guidance is available on this, and it is therefore dangerous to manage technical assistance by following blueprints. One should rather be ready to modify plans, as a function of observed results and changes in the project's environment. This imperative underscores the importance of monitoring and evaluation.

We will not go into all the aspects of technical assistance management in education projects. On this subject, the reader is invited to refer to the paper of F. Lethem and L. Cooper.[3] By way

3. F. Lethem and L. Cooper, op. cit.

of example, we consider the crucial problem posed by the limited success of technical assistance in the training of nationals. Project evaluation shows that this is due to three main causes:

- The shortage or instability of national counterparts;
- Insufficient availability of the experts, who are too busy with other administrative or technical tasks;
- The inaptitude of some of them as trainers.

Certain remedial measures may partly overcome these shortcomings. First, the terms of reference of experts should indicate precisely what training activities are their responsibility, so as to allow for their monitoring. Second, experts' contracts should include, whenever necessary, financing for their participation in courses designed to prepare them for their future training role. Third, it is up to the project manager to make sure that counterparts are appointed in good time, and to take steps to ensure their stability. Finally, he should monitor the training activities of technical assistants, in particular by asking them for periodic reports on these activities. Such information should make it possible for the project manager to adjust the operational plan and the experts' terms of reference as necessary.

In a more general way, we have seen that uncertainty dominates the implementation of most education projects. Thus it is of capital importance for the manager to receive periodic information and analyses on the project's progress, on its initial results, and on any implementation obstacles it is running into, with a view to taking any corrective measures with full knowledge of the facts. This is the purpose of project monitoring and evaluation, which we will now study.

Monitoring and evaluation[4]

The experience of development projects is fraught with problems. Their implementation has frequently run into serious difficulties. And their results are far from always having met the hopes placed in them. This is particularly true of projects with social

4. IIEP, Unit on the identification..., op. cit.

objectives, such as education, health or rural development projects, and especially when they aim at something else than just quantitative expansion.

Despite these apparent failures, specialists and politicians have continued to promote some of the strategies whose past effectiveness has been dubious. Other projects have tried, once again without success, to apply them. How many times, for example, have people tried, despite previous disappointments, to introduce practical agricultural work into primary or secondary education, with a view to motivating children for agriculture work, and to slowing rural exodus? Or to transform teachers into rural development or literacy officers in their leisure time?

Studying past experience, specialists have become aware that the lack of reliable information on the implementation conditions and results of programmes and projects was often at the heart of repeated problems and failures. They noted that in the absence of appropriate information:

- Managers can neither detect improper functioning, nor of course take early decisions to remedy them;
- Decision-makers can neither analyse the causes of problems, nor choose more appropriate objectives and implementation strategies on the basis of good understanding.

Design or management errors detected during monitoring and evaluation are rarely faults of any great gravity. On the contrary, they can serve as lessons which adept planners should take advantage of, either to modify the current project, or better to design future projects. In projects as in life, one usually learns by making mistakes. As Oscar Wilde put it, experience is the name everyone gives to their mistakes. In this respect, it is important to carefully distinguish between evaluation and administrative inspection, a distinction we will come back to later.

The development of monitoring and evaluation techniques started from this kind of observation. Their purpose is systematically to collect and analyse information about the project's implementation and results:

- either to detect potential or actual problems in the course of execution in order to apply timely remedies, and this is called monitoring;

- or to learn lessons from the programme or project:
  a. in the course of execution, so as to have a preliminary overview and possible revision (evaluation during execution or formative evaluation);
  b. after completion, for the benefit of similar operations (retrospective evaluation or summative evaluation).

Thus monitoring and evaluation return a flow of information about progress and results to project managers and educational planning officers, who should take it into consideration, the former in their management, and the latter in the formulation of policies, plans and projects. This is the concept of feedback.

We note that monitoring and evaluation differ from the *a priori* and *a posteriori* controls, whose tradition is particularly strong in the public administration of certain countries, and whose purpose is to verify the conformity of action to rules. In contrast, the purpose of monitoring and evaluation is to judge the activities and the results of the action.

Monitoring

Monitoring is a system of continuous information *for the use of a project manager*. It generally consists of several indicators regarding the project's key aspects (for an example, see Table 7). In the management of enterprises, this series of indicators is referred to as the *dashboard*, a name that gives a good sense of this tool's purpose. The manager has a series of lights on his dashboard, whose flashing warns him of a problem in the enterprise, and allows him to act quickly.

The indicators needed by a project manager obviously vary with the type of project and with the conditions of implementation. Since they are indicators for short-term action, the financial and economic aspects are preponderant. In order to determine them, one must identify those tasks involved in the implementation process that might generate problems. Once this has been done, one has to select for each of these activities a small number of preferably quantifiable variables that indicate the progress of each activity towards its objective.

Table 7. Indicators for the monitoring of a project's adult education component

Objectives	Indicators	Targets: At project end	Targets: At present date	Completed at present date
	(a) Inputs			
	Disbursements[1]	400	300	374.3
	Equipment	160	120	181.3
	Technical assistance	80	60	9.3
	Training	100	75	11.9
	Monitoring and operations	30	22	108.6
	(b) Outputs			
Adult literacy	Number of centres opened	2 000	1 000	768
	Thousands of booklets printed	440	220	244
Youth literacy	Number of cadres trained	300	150	0
Training of women	Number of women's groups	92	46	92

[1] In millions of monetary units.

The indicators are generally of two types:

- Means or input indicators: for example, expenditure disbursed, the number of metric tons of cement used, technical assistance services in man-months;
- Output indicators: for example, the number of square metres constructed or individuals trained, the unit cost of construction or training, pupil enrolment, class repetition rate.

To be effective, monitoring must be an integral part of the project, in other words prepared at the same time as the project (see Chapter II), with consideration given to the main indicators to be collected (a list that can be modified according to changing needs), the collection methods and sources, the persons in charge, and the costs of monitoring. A small monitoring and evaluation unit may be included in the project implementation unit's

organizational chart. It may be advisable to collect benchmark data (values of certain output indicators before project implementation) in advance.

The manager monitors the implementation of his project by comparing the current value of each indicator:

- on the one hand, with the value it should have according to the operational plan;
- on the other hand, with the expected value upon project completion.

This gives him a sense of whether a given project component is ahead of or behind schedule, whether or not expenditure is being exceeded, whether unit costs are in line with the forecast, whether the impact of improvements is starting to become evident, etc.

Experience shows that project monitoring has not always been effective.[5] The main shortcomings appear to be due to lack of manager motivation, excessive complexity and cost of the monitoring system, or inadequate integration of this system in the project. In practice, monitoring is useful only if:

- the indicators to be collected are few, and correspond to key project management problems;
- their collection does not involve too much time or expense;
- the project director is convinced of the usefulness of monitoring;
- monitoring is an integral part of the project's organization.

The World Bank monitors execution of projects it finances through periodic reports, supplemented by regular supervision missions, in principle one every six months. It has developed a series of indicators for this purpose, the most important of which pertain to disbursement, costs and implementation delays.

While the monitoring of selected indicators allows for detection of difficulties occurring during implementation, it is inadequate to appraise the project's overall progress towards its objectives, and the possible causes of improper functioning. For this, a more refined analysis is necessary, i.e., an *on-going evaluation*, on the basis of which, should the need arise (for

5. W.C. Baum and S.M. Tolbert, op. cit.

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example, in the event of substantial delays in project execution or government policy changes), decision-makers may apply a well founded and rational revision of the project's objectives, strategy and resources.

On-going evaluation

On-going or formative project evaluation has been appropriately compared to the process engaged in by the members and coach of a football team at the half-time break of a match, before play resumes.[6]

The football team's objective is to win the match, or perhaps to draw a tie if the opposition is much stronger. They have prepared carefully for the event. The coach has prepared a match strategy, taking into consideration the nature of the opposition and his team's potential. This plan has been applied by the players for 45 minutes, and they have obtained a partial result. At half-time, the coach, who has observed the match, determines together with the players the weak and strong points of their own play, and those of the other side; he indicates how difficulties can be overcome, and may alter the match strategy, or even the match objectives, for the second half.

In more general terms, the coach and players compare their actual behaviour with what had been foreseen, they consider the unforeseen factors arising in the course of the action, and decide on the corrective measures to be applied in order to obtain the best possible result at the end of the match. The coach and the players are engaged in on-going evaluation -- or more precisely mid-term evaluation -- of their project, which is the football match.

The evaluation of an education project has similar goals and a similar process. In a well prepared project, the objectives and their quantitative targets, the strategy, the resources and the methods are defined in advance. Evaluators compare the results actually achieved by the project at the time of the study with the results foreseen for the same date, as indicated in Figure 2.

6. M.E. Vergara, *Evaluación de proyectos sociales*, San José, Costa Rica, Ministry of Culture, 1980.

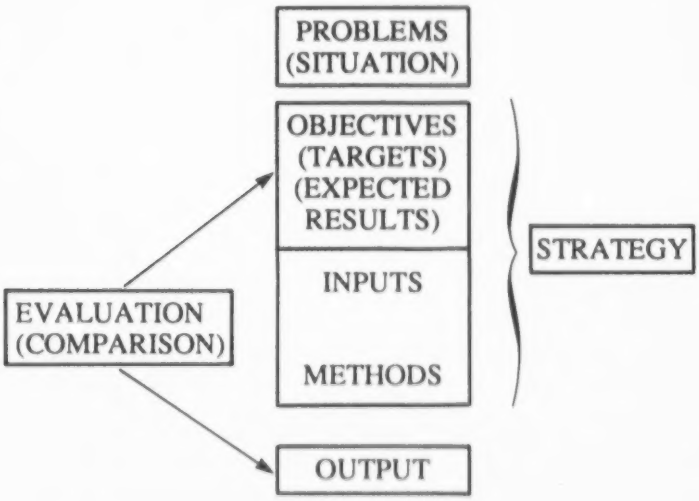

Figure 2. *The evaluation*

In on-going evaluation, this comparison makes it possible for evaluators to estimate the extent to which the project is on the way to achieving its quantitative and qualitative objectives. If this is not the case, they analyse the reasons for it. Without neglecting the economic and financial dimensions of education projects, evaluation often attaches greater importance to educational and social aspects than does monitoring. Evaluators recommend remedies on the basis of their study: changes in the allocation of the project's material and human resources, in its methods, and even in the objectives and strategy, if it has been raised that unforeseen obstacles are arising.

In a retrospective evaluation, the comparison allows evaluators to make a final assessment of the project: resources utilized, results obtained as compared to objectives, performance of managers. They are then in a position, on the basis of

experience with the project, to make recommendations regarding the design, preparation and implementation of projects of the same nature and/or in the same region.

Even though the methods of on-going evaluation differ from those of monitoring because the analysis goes deeper, these two modes of gathering information are closely linked within the framework of a project. Like monitoring, and for the same reasons, evaluation must be an integral part of the project in order to be fully effective; it is preferable to provide for it as of the project preparation phase. Information collected periodically by the monitoring system is utilized by evaluators. Within a project, monitoring and evaluation generally come under the same unit. To guarantee objectivity, it is desirable that this unit answer directly to the project director, and not to operational officers. In this case, the evaluation is internal, i.e., it is carried out under the responsibility of the entity entrusted with project implementation.

In other cases, in order to guarantee greater objectivity of the evaluation, it may be necessary to call on individuals having no connection with the project. The evaluation is then said to be external.

Experience has shown that it is desirable to have operating staff participate in evaluation during implementation, and to share the conclusions with them. This makes it possible to at least partly avoid having the evaluation perceived by project staff as an inspection that might possibly result in sanctions. Associating the staff with the evaluation also provides them with useful information, and ensures their co-operation in undertaking any corrective measures.

Because of the methodology used, evaluation can give reliable results only for projects whose objectives are clear, precise and drafted in operational terms, preferably translated into quantitative targets and expected results. When this important condition is not fulfilled, evaluators try to specify operational objectives a posteriori, in order to select the results that should be observed, and to reconstitute the project's initial situation.

On-going evaluation uses methods similar to those of diagnostic studies (see Chapter II). In-depth evaluations also apply more refined techniques, for example, the measurement of

pupils' school results. Despite the obvious importance of the latter, it is regrettable that such information is frequently omitted from education project evaluations.

Retrospective evaluation[7]

The final stage of the project cycle, retrospective evaluation, plays an essential role as an experimental basis for the design of future projects, and, more broadly, as an element in a pragmatic strategy for educational planning.

Retrospective evaluation differs from on-going evaluation by its time of occurrence, namely after the project's end, when all disbursements have been made and final costs are known precisely. At this point it is possible to draw up a balance sheet for most aspects of the project, and to work out the reasons for its apparent success or failure. The essential functions are as follows:

- reporting on the project's results to higher authorities (the government, and where applicable the external financing source);
- identifying project characteristics that could be advantageously repeated in other projects, and, conversely, the traps to be avoided.

The conditions and the methods for efficient retrospective evaluation are similar to those for on-going evaluation.

Selecting the date of retrospective evaluation is important. It should take place one or two years at most after project completion, so that implementation files can be found easily and that participants still remember well the circumstances. The disadvantage of this timing is that the project's impact on the quality of education is generally not evident at such an early date; its impact on society is even less so, in particular as far as employment is concerned. For example, newly created schools will not yet have many graduates, and it will be too early to judge their professional integration. Hence the often expressed need to carry out an *impact evaluation* five or ten years later.

7. W.C. Baum and S.M. Tolbert, op. cit.

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Once the project is over, investigations can go much further than in on-going evaluation. They encompass all the aspects of the project:

- project administration and management;
- execution of physical components;
- execution of intellectual components (technical assistance, training, studies, etc.);
- project costs and financing;
- the educational, social, economic and other impacts of the project;
- institutional development;
- sustainability of the project's results.

After comparing actual with expected results in these various respects, evaluators look for the causes of any observed gaps, with reference to the criteria mentioned in Chapter II: definition and clarity of objectives, priority, feasibility and efficiency of the project. In projects with essentially economic objectives (transport, energy, agriculture, etc.), efficiency is often estimated on the base of a cost-benefit analysis. Evaluators ultimately try to make an overall judgement of the project's value by comparing results achieved with the effort made.

The largest external aid sources have established permanent retrospective evaluation departments for the projects they finance, and so have several developing countries. The World Bank has extensive experience in this field, so we briefly describe the organization and the methods it has adopted.

One or two years after the end of each project, the World Bank division responsible for projects in the given country prepares a *project completion report*, which constitutes a first retrospective evaluation (see Box 9 for an example). The World Bank has on occasion entrusted UNESCO with the preparation of education project completion reports.

In order to ensure greater evaluation objectivity, each project completion report is submitted both to the borrowing government, and to the Bank's Operational Evaluation Department (OED), a body independent of operational departments and answering directly to the Bank's President. The government concerned sends its comments on the report to the Bank, and often prepares its own

Box 9. *Summary of the completion report of a World Bank financed education project*

	Forecasts	Results
Total project cost:		
in local currency (millions)	178.1	190.2
in $ US (millions)	8.9	9.9
Amount of credit in $ US (millions)	8.0	8.0
Amount disbursed in $ US (millions)	8.0	7.99
Amount cancelled in $ US (millions)		0.01
Completion date of equipment components	Dec 82	Feb 84
Disbursements closure date	30 June 83	30 June 83

Project implementation

Apart from the procurement of a few equipment items the project was executed within a normal time period, with no change in content and successfully. This favourable execution was due to convergence of the following factors:

(a) *Local funds.* The government ensured timely establishment and regular payments to two funds specific to the project:

- a renewable fund of $ 50 000 for local procurement;
- a renewable fund of $ 250 000 for civil engineering works and local expenses.

(b) *Management.* The project was well administered by a permanent, competent and highly motivated project unit. This unit received constant and effective support from the Minister.

(c) *Supervision.* The project was supervised regularly by the World Bank (one mission every 6 months).

(d) *Civil engineering.* The drawing up of plans was much advanced before the credit was made available, which minimized the risk of delay in the execution of works. Having a single site (for 3 institutions), proximity to the capital, and the choice of a single contractor also contributed to good construction progress. With the exception of several minor points, construction and equipment were

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carried through with no problems. The investment having been more substantial than expected, the effectiveness of the project was enhanced.

(e) *Technical assistance.* TA was effective due to a single source of assistance. However, the services of two of the 9 experts presented shortcomings.

Project impact

The advantages resulting from the project for the country are undeniable:

- qualitative and quantitative development of vocational training;
- development of the ENSET complex of institutions, and support for other vocational training centres; it may be assumed that this is a permanent achievement, provided the institutions are given an adequate operating budget, and provided their maintenance and regular evaluation of their activities are assured;
- search for a good training-employment balance;
- strengthening of the education projects unit;
- transfer of knowledge and know-how through experts and scholarships, but absence of a final mission report.

The advantages enumerated above are partly due to the project's simplicity and flexibility, in particular the significance of the provision for contingencies.

completion report. OED studies the reports submitted to it and then prepares, for 50 per cent of them, a detailed *performance audit*, based on its consultation of the documentation and a site visit. Differences of opinion about evaluations between project divisions and the OED sometimes give rise to fruitful discussions.

OED disseminates lessons learned from evaluation, first through broad circulation of the reports themselves, then through the publication every year of a summary of evaluations, and through more global studies of certain types of projects. The preparation of completion reports is an opportunity for divisions responsible for projects to formulate and assimilate their own evaluation lessons. These divisions also prepare annual summaries of experience acquired in the countries concerned.

Finally, to meet the need mentioned above, the OED does from time to time carry out impact evaluations of selected projects, and especially education projects. These impact evaluations update previous evaluations, in particular by stressing changes occurring in the impact of the project, and the reasons for successes or failures.

The World Bank's evaluation system is expensive: 59 man-years in 1985,[8] or 2 per cent of the Bank's total professional staff resources. This high cost is not surprising given that 250 projects are evaluated every year, half of which are subjected to two such studies. The World Bank considers that this expense is largely compensated by the experience acquired as a result.

Not many governments have created national retrospective evaluation systems to date. The Philippines has adopted a system with two levels: each executing department prepares its evaluation, which is submitted to the National Economic and Development Authority. The Mexican evaluation system comes under the office of the President of the Republic, that of the Republic of Korea under the Economic Planning Board. Given the high cost of retrospective evaluation, these systems can only deal with a limited number of projects at present, but their experience is encouraging. It is to be hoped that they will spread to other countries, to allow for improvements in project quality on an experimental basis.

8. W.C. Baum and S.M. Tolbert, op. cit.

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Conclusions

In a recent work,[1] T.W. Schultz argues that most of the efforts made by rich countries to assist less advantaged nations in increasing their productivity have missed their objectives. According to Schultz, the main reason for this failure is the insufficient importance attached to investment in human capital, in other words in education and health.

While the sums invested by external aid sources for education have declined to some extent since the seventies, this is perhaps because of disappointments experienced in the field. Wishing to do more than simply aid the quantitative expansion of ineffective systems of mediocre quality, donors tried to help with the implementation of educational reforms. Unfortunately, these reforms, in which education had placed much hope, fell far short of expected results. Autopsies of these reforms showed that most of them were founded on generous doctrines, but that they were lacking in realism, and made too little allowance for the results of experience.

The time has perhaps come for a more modest, more modern and also more pragmatic educational planning, which should base its strategy on realities and take cautious action, starting from a solid experimental base. It is possible that such a strategy would regain the confidence of investors.

1. T.W. Schultz, op. cit.

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The projects method can make a substantial contribution to this new trend in educational planning. It is not the product of a theoretical intellectual construction, but the fruit of a quarter of a century of experience in developing countries. This experience teaches us that, while we know how to build schools for a growing number of pupils, our knowledge about methods to improve the quality and effectiveness of education is much less advanced. This is why projects now tend to limit their objectives and their resources, but to devote a greater effort than in the past to the evaluation of actual results.

The use of the projects method is not spreading only in developing countries. It is also becoming a new mode of planning and management in certain developed countries with centralized education systems. For instance, as shown by T. Malan,[2] French plans have, since 1975, included specific priority action programmes, which are implemented through contracts between the state and local bodies or training institutions. Apart from provision of funds, these programmes also include a monitoring and evaluation system, thus making it possible to relate capital and operating expenditure with results achieved.

The justification for projects on the grounds of their response to priority needs or problems within the education policy framework, clear and precise definition of objectives, preliminary study of the feasibility of planned actions and investments, limitation of the implementation period and the budget, careful monitoring of execution and evaluation of results with a view to drawing lessons -- such are the main features of education projects. On the basis of present trends, it may be supposed that they will continue to be an essential tool of economic and social development.

2. T. Malan, op. cit.

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The booklet

This booklet examines the role of education projects in the planning process, particular attention being given to the criteria for appraising projects. If it is essential that education projects should be consistent with national priorities, it is no less important that they should be viable in educational, social, administrative and financial terms. The author frequently makes reference to specific cases, that is, education projects undertaken in a wide range of developing countries during the past decade.

In stressing the importance of integrating the conception and the execution of development projects in the overall planning operation, the booklet attempts to provide answers to those problems which some countries have to face during the elaboration of education plans.

The author

André Magnen is a former UNESCO staff member. In this function, and in the framework of the UNESCO/World Bank Co-operative Programme, he has conducted sectoral studies, identified and prepared projects in numerous countries.

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